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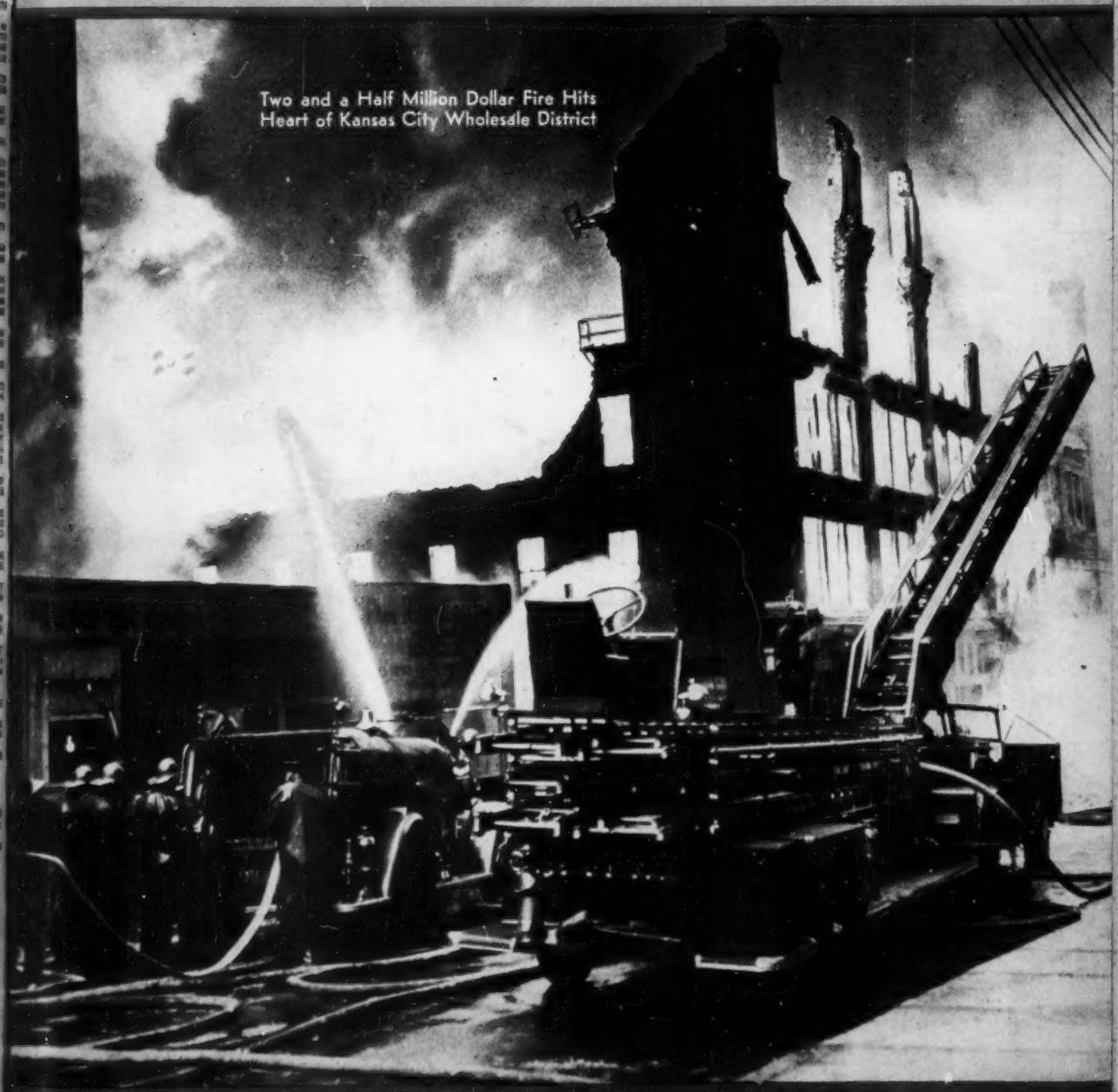
# FIRE ENGINEERING

*The Journal of the Fire Protection Profession Since 1877*

Member

JANUARY, 1945

Vol. 98, No. 1



Two and a Half Million Dollar Fire Hits Heart of Kansas City Wholesale District

A CASE - SHEPPERD - MANN PUBLICATION

# SMOKE Will knock out the best of Men!

## The EMERSON RESUSCITATOR

### *will keep your men on the Fighting Front*

More than likely your department is short-handed. You can't afford to have men knocked out by smoke suffocation. Insure against this with the best equipment available.

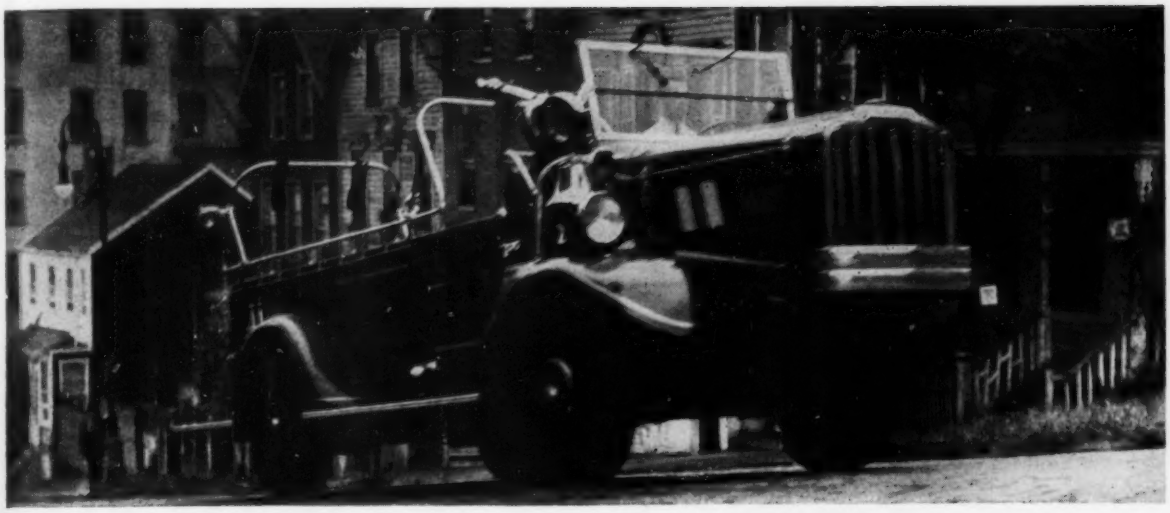
Be ready to protect your own men and the citizens of your community, with the finest resuscitator money can buy.

Send now, for complete information

**J. H. EMERSON COMPANY**

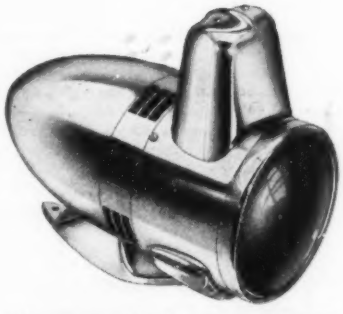
*Representatives in Principal Cities*

22 COTTAGE PARK AVENUE • CAMBRIDGE, MASS.



# POWER—

## IN APPARATUS AND IN SIRENS



A large, powerful, deep tone FEDERAL Siren with oscillating light.

Unfailing power, and reserve power, are necessary in fire fighting apparatus *and also in sirens.* That is why FEDERAL Sirens are preferred by so many cities and towns. They are backed by 40 years of sound research and engineering. They are ruggedly constructed to give long and unfailing service, and their tone roar is unusually powerful, giving effective safety signals far ahead of fast moving apparatus.

There is an impressive variety of FEDERAL Sirens from which to choose—sirens with flashing red light, or with oscillating red light—sirens of the long roll, coaster, and double coaster types—sirens that combine visible and audible warning signals—sirens that have real stamina and power.

ARMY E NAVY

***WRITE TODAY FOR BULLETINS***

# FEDERAL ELECTRIC CO., INC.

## SIREN HEADQUARTERS

8702 So. State Street Chicago 19, Illinois

# FIRE ENGINEERING

*A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection*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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

## Turning Over New Leaves—
## —and Some Old Ones!

FIRE ENGINEERING enters upon its 68th year as the authoritative journal of the fire service.

● In retrospect, it is gratifying to know of the unnumbered legions of readers whose exploring fingers have turned the many thousands of pages of this publication during the past 67 years.

● It is even more inspiring to know that so many readers have found, in the editorial and advertising sections of these many issues, the information on fire service plans, programs and products they so urgently wanted.

● This "turning over of new and old leaves" of FIRE ENGINEERING is aptly expressed by the many communications that come to us, such as this from Walter Merchant, Engineer of the New England Fire Insurance Rating Bureau (enclosing his check for still another year of "F. E."):

> **"Although out of the fire department for 24 years, I wouldn't be 'out of this paper' for any consideration."**

● FIRE ENGINEERING is justifiably proud of its many friends like Mr. Merchant, prominent in the fire service or in important allied activities, who turn over new and old leaves of this publication, year after year, and who rely upon its editorial and advertising content for all matters pertaining to the fire service.

*The Publishers*


**FIRE ENGINEERING**

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price U. S. and Latin America, $2.50 a year; Canada, $3; Foreign, $3.50; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1945, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

A CASE-SHEPPERD-MANN PUBLICATION
*"Specialized* Leadership"

Buffalo 750 Triple Combination Pumper as Built for Baker, Oregon

# SAFE

## RESERVE POWER

1895-1945
GOLDEN ANNIVERSARY
50 Years of Service

**BUFFALO FIRE APPLIANCE CORPORATION**

**BUFFALO 2** **NEW YORK**

# ORIGINATED BY JOHN BEAN MFG. CO.

## THE ORIGINAL HIGH-PRESSURE FOG FIRE GUN

## 600 lbs. AT THE NOZZLE!

The FMC Fog Fire Gun—built only by Bean—is designed especially for High-Pressure fire fighting. There's nothing else like it!

*Note these features:*

1 **PROTECTIVE SPRAY.** Special spray protects face and shoulders from heat.

2 **ADJUSTING BARREL.** By turning barrel, flow can be changed from a straight "power" stream to a close-up fog for any type of fire.

3 **TRIGGER GRIP.** Gives natural position to arm and grip and is easy to hold. No fatigue.

4 **GUN LOCK.** Stream can be set in any pattern and locked there if desired. Relieves arm muscles.

5 **HOSE SWIVEL.** Eliminates bothersome twisting of hose.

**FMC FOG FIRE GUN IN ACTION!** *Fireman at left is holding trigger release with his right hand and adjusting barrel with his left hand. By turning the barrel slightly, he can change the flow from a straight stream to a wide fog pattern, and can get close to fires to do effective work.*

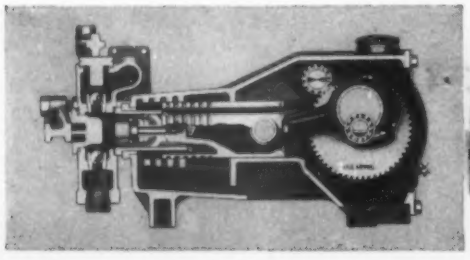
**A ONE-MAN JOB!** *With pressure on, the FMC Fog Fire Fighter gun practically carries itself and can be poked into cellars, attics or holes in partitions. If the fire is intensely hot, it is possible to use the protecting spray nozzle to protect your face from the heat and work right up to effective distance from the fire.*

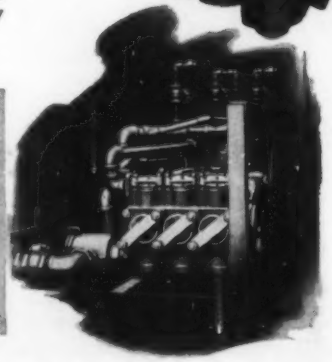
## FMC HIGH PRESSURE PUMP

### *Built only by Bean*

This is the pump that is revolutionizing fire-fighting technique.

Note how sturdy and compact it is — how simple, yet modern in design! The cylinders are porcelain-lined; the gears are helical cut, and there are latest type heavy duty bearings on the eccentric shaft and countershaft. Both the ball valves and their threadless and gasketless tapered seats are of stainless steel. And all working parts are bathed in oil. It has many other proven endurance features.





## 800 lbs. AT THE PUMP!

That's a pretty tough job for any unit. But — the FMC High-Pressure Pump easily maintains that pressure, without overworking. The reason? It is a 3 cylinder, positive displacement horizontal and compact pump designed for even higher pressures by F.M.C. High-Pressure Pump engineers.

**BUILDERS OF BEAN HIGH-PRESSURE**

# FMC HIGH-PRESSURE SYSTEM FOR FIGHTING FIRE WITH FOG

### THE MODERN WAY OF FIGHTING FIRE

Don't confuse the results obtainable from FMC High-Pressure Fog Fire Fighting with any other system. There's nothing else like it for speed, for efficiency, for all-type fire protection.

This FMC High-Pressure System — originated by the John Bean Mfg. Co.—has revolutionized fire fighting technique.

### IT'S THE PRESSURE THAT COUNTS!

In fighting fire with fog—you must have high pressure to get maximum benefits. And that's what you get with the FMC Fog Fire Fighter.

The FMC High-Pressure Pump easily delivers and maintains *800 lbs. pump pressure*—better than *600 lbs. nozzle pressure.*

### A LITTLE WATER GOES A LONG WAY!

The high pressure gives you a combination of high velocity and finely-atomized water—just what you need to *blast—cool* and *smother* flame. Every droplet of water is broken up into thousands of tiny particles that can be *"blasted"* into the source of the fire.

One gallon of this finely-atomized fog—properly used—has the fire-quenching possibilities of many times that of low-pressure water.

### BY ALL MEANS—GET THE FACTS!

Investigate! FMC High-Pressure Fog is the greatest contribution ever made to fire fighting. It has proved its worth at hundreds of town, rural and airport fires.

Right now—the Armed Forces are taking most of the production of FMC High-Pressure Fog Fire Fighters but—you should be ready to modernize the moment civilian needs can be met. Start planning—now!

**ONLY THE FMC HIGH-PRESSURE FOG FIRE FIGHTER PACKS THE NEEDED PUNCH TO PRODUCE AND MAINTAIN 800 LBS. PUMP PRESSURE—600 LBS. NOZZLE PRESSURE. THE REASON? THE PUMP—BUILT BY BEAN—WAS DESIGNED FOR HIGHER PRESSURES BY F. M. C. HIGH-PRESSURE PUMP ENGINEERS.**

**STANDARD FMC FOG FIRE FIGHTER.** *A self-contained fire-fighting unit. Carries its own water supply and complete fire-fighting equipment. Provides two guns of 30 gallons each at 600 lbs. nozzle pressure. Quickest possible action on arrival.*

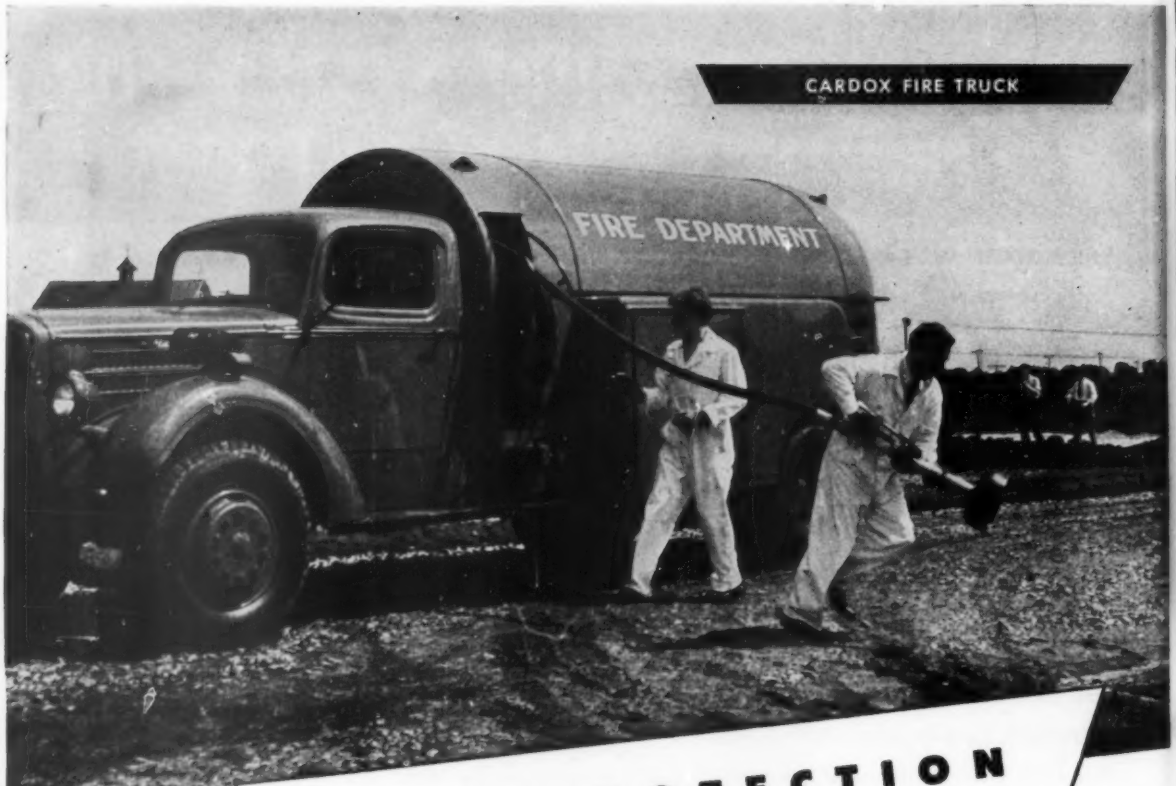
## FMC Original HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

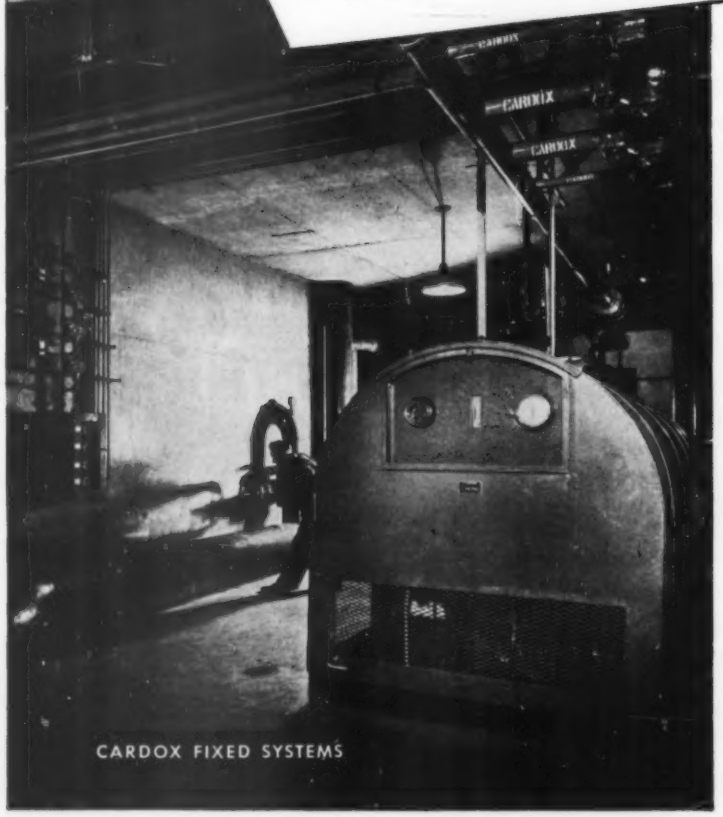
**FOOD MACHINERY CORPORATION**

JOHN BEAN MFG. CO., 709 HAZEL ST., LANSING 4, MICH. • BEAN-CUTLER DIVISION, 409 JULIAN ST., SAN JOSE, CALIF.

PUMPS FOR OVER SIXTY YEARS




# FIRE PROTECTION




**In and around America's vital war plants . . . on our big and busy military airfields . . . fire protection is provided by Cardox Fire Extinguishing Systems, Fire Trucks and Airport Fire Trucks.**

**Each is a highly specialized fire extinguishing tool . . . exactingly engineered to do a specific job quicker and more effectively than it has been done before. But all Cardox Systems and Mobile Units have one outstanding characteristic in common: *Cardox Engineering in the application and control of carbon dioxide, stored at 0° F. and 300 p.s.i. in a single Storage Unit containing from ¼ to 125 tons of fire-destroying Cardox $CO_2$.***

**For Cardox has given the recognized advantages of carbon dioxide a new and broader scope of fire extinguishing performance. Because of this, these advantages can be applied equally well to small or *very large* fires through *mass***

# —by CARDOX—

application of Cardox $CO_2$, released in *pounds* or *tons*.

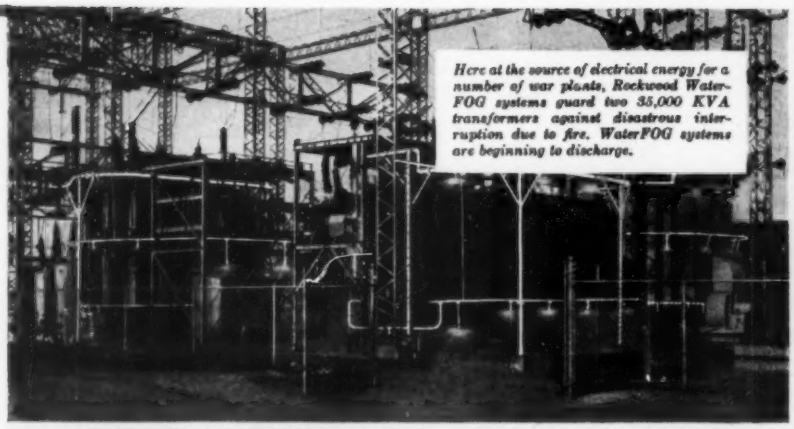
The efficiency of Cardox Systems and Mobile Units in giving fast-acting, non-damaging carbon dioxide *enhanced extinguishing* performance is made possible by Cardox methods of control and application that give Cardox $CO_2$: (1) Uniform extinguishing characteristics regardless of plant or atmospheric temperatures; (2) Availability in ample quantity for application at high rate and continuous protection; (3) High $CO_2$ "snow" yield for increased cooling effect; (4) Effective projection through relatively great distances.

On the basis of this performance Cardox has been given many of the toughest fire protection assignments—*all over the country*. Find out how through practical cooperation Cardox and its engineering staff can assist you to make your planned fire protection more effective. Drop us a line on company letterhead for Bulletin 1915.

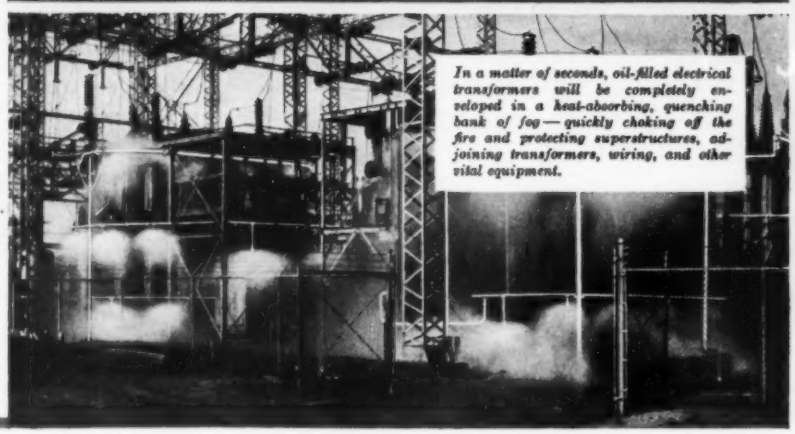
**CARDOX CORPORATION**
**BELL BUILDING • CHICAGO 1, ILLINOIS**
New York • Boston • Washington • Detroit • Cleveland
Atlanta • Pittsburgh • San Francisco • Los Angeles • Seattle

# WaterFOG

## Shields The Heart Of A War-Working Community



*Here at the source of electrical energy for a number of war plants, Rockwood WaterFOG systems guard two 35,000 KVA transformers against disastrous interruption due to fire. WaterFOG systems are beginning to discharge.*



*In a matter of seconds, oil-filled electrical transformers will be completely enveloped in a heat-absorbing, quenching bank of fog — quickly choking off the fire and protecting superstructures, adjoining transformers, wiring, and other vital equipment.*

### ROCKWOOD WaterFOG TAKES THE FURY OUT OF OIL FIRES

Now water . . . cheap, plentiful . . . becomes your *surest* means of protecting against fires in flammable liquids — whether in transformers or open tanks.

WaterFOG is safe to use on such fires . . . and completely effective. Its tiny water particles are so highly heat-absorptive (in direct proportion to their fineness) that the fire is rapidly cooled and confined. No splashing and spreading the blaze. No excessive water damage. No danger of water being exhausted.

WaterFOG, fighting fires three ways . . . by quenching the flames, by retarding vaporization, by shutting off oxygen . . . gives you complete protection at lowest cost. And — what is very important — it cools surrounding structures to guard against "flash-back"

Rockwood WaterFOG is created by impinging streams of water at scientifically-determined angles — correctly engineered for particle size, fog pattern, and velocity. Rockwood-engineered fixed installations approved by Underwriters' Laboratories and Associated Factory Mutuals.

Nozzles and applicators for fire hose lines also available. Colored movies (16 mm.) showing tests of Rockwood WaterFOG are available to business executives. Write for Bulletin 123.

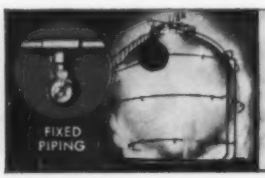
**ROCKWOOD SPRINKLER COMPANY**
54 Harlow Street, Worcester 5, Mass.
*Specialists in Fire Protection Engineering, Equipment and Installation since 1907*

**TYPICAL WaterFOG APPLICATIONS ARE:**

| | |
|---|---|
| quench and dip tanks | oil switches |
| paint shops | dryers |
| control rooms | oil storage, etc. |

*Water Engineered by Rockwood Cools, Confines, Smothers Oil Fires*

ROCKWOOD WaterFOG



# IF WE WERE in the MARKET FOR FIRE APPARATUS...

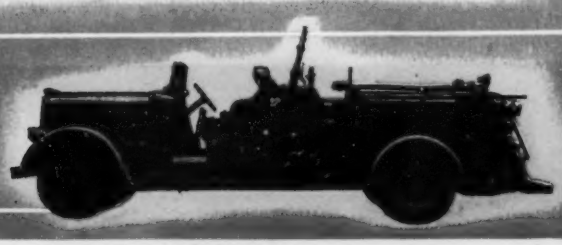
| HERE'S what we would want to know about the manufacturer. | AND here are the answers as they apply to Ward LaFrance |
|---|---|
| ● *Just who are these people, anyway?* | The Ward LaFrance business is over twenty-five years old. Now a division of Great American Industries, Inc., Mr. A. Ward LaFrance continues to head and supervise engineering and manufacturing at Elmira, as Vice President of "G.A.I." |
| ● *What's their reputation?* | We'd rather let others tell you about that, and we will gladly give you the names of hundreds of fire officials in towns and cities of all sizes who know Ward LaFrance apparatus from years of using it. |
| ● *Are they "up" on the latest developments in fire engineering?* | Among recent purchasers of Ward LaFrance-built fire apparatus are the U. S. Army, the U. S. Navy, New York City, Philadelphia, Pittsburgh and Minneapolis. Nothing but the latest and best will satisfy such customers. |
| ● *Is motorized fire apparatus their real business, or just a side line?* | Ward LaFrance people are "fire" people. Their engineers are specialists. Fire apparatus is their *main* peacetime line, not a side line. |

*Now* is the time to think about replacing old motorized equipment with ultramodern apparatus. Consult our engineers about the requirements of your community.

**WARD LaFRANCE**

TRUCK DIVISION, GREAT AMERICAN INDUSTRIES, INC.

ELMIRA NEW YORK



C-O-TWO is listed by the Underwriters' Laboratories; fully approved by Factory Mutuals and the Bureau of Marine Inspection and Navigation. C-O-TWO is a registered trade mark. To be safe, specify C-O-TWO.

# VALUABLE Equipment
## *is worthy of* ADEQUATE PROTECTION

**This C-O-TWO wheeled type carbon-dioxide fire extinguisher plays an important part in industrial fire protection. Because of its easy mobility one man can operate it against sudden or flash fires which might cause serious damage and shut-downs by the usual extinguishing methods; fires are controlled in seconds, and there will be no damage to materials or machinery. C-O-TWO portables, hose units, smoke detecting and fire extinguishing systems have played an important part in the production of vital war materials and are used as standard fire protection on practically all transportation and combat equipment of the Armed Forces. C-O-TWO will definitely be basic fire protection in the post war period, and C-O-TWO equipment is available for industrial fire protection right now. Write for information.**

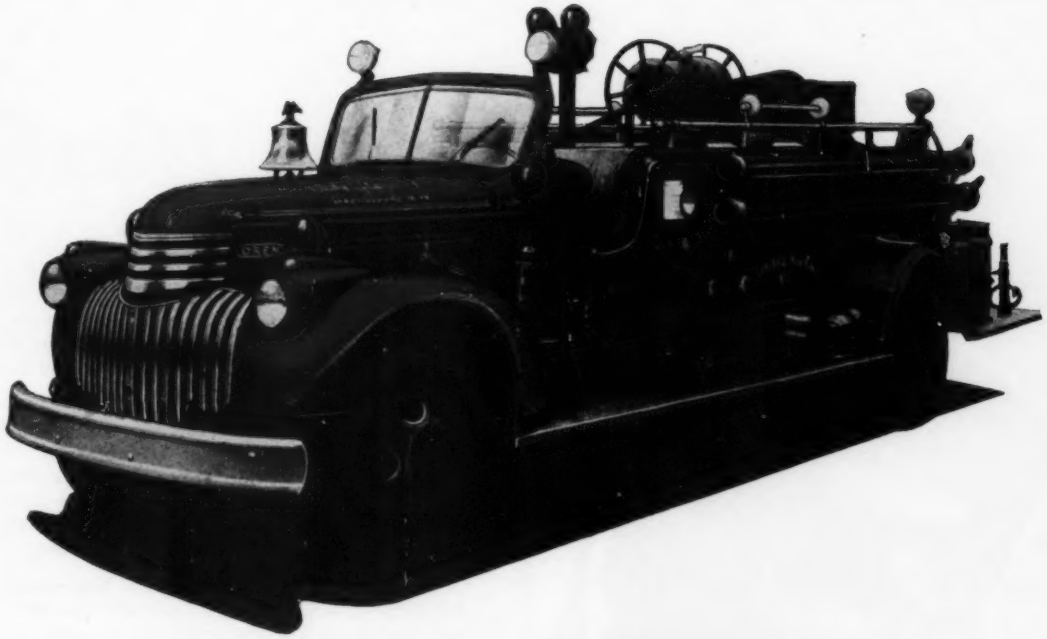
**Squeez-Grip Saves Gas — Saves Time — Saves Lives — It's Modern — It's Faster.**

**C-O-TWO FIRE EQUIPMENT COMPANY**
NEWARK 1, NEW JERSEY

FIRE APPARATUS CUSTOM BUILT

# OREN

## ANOTHER DEPARTMENT MODERNIZED WITH A CUSTOM-BUILT OREN



Triple Combination Pumper with 500 G.P.M. Pump and 200 gallon booster tank. Mounted on Chevrolet Chassis and used at Martinsburg, West Virginia, from the Westphal Hose Co. No. 5 station.

**"THE SOUTH'S ONLY FIRE TRUCK MANUFACTURER"**

# OREN FIRE APPARATUS COMPANY

1201-9 West Salem Avenue

**ROANOKE, VIRGINIA**

# Safety Precautions Demand KLEERLINE COUPLINGS on all your New Hose

POSTWAR specifications call for KLEERLINE COUPLINGS *on all new hose* because unforeseen accidents to fire fighters demanded careful attention to small details, indicating clearly the imperative need for a change in the design of fire hose couplings.

So KLEERLINE COUPLINGS are streamlined to assure the clearance of all obstacles. Note there are no protruding arms to catch in ladders or other obstructions, nothing to wear holes in hose, easier and speedier to couple up but still rugged enough to take the hardest knocks.

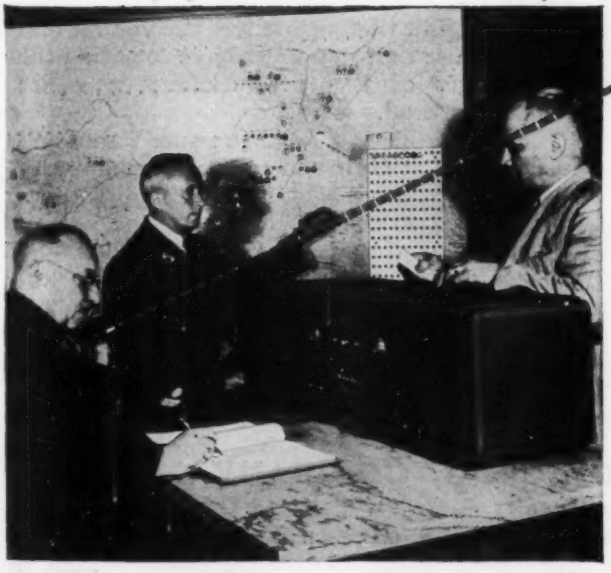
Prudent fire chiefs everywhere are specifying KLEERLINE COUPLINGS on all postwar fire hose—and we are meeting that demand as fast as Uncle Sam allows us.

Full information through your dealer.

FASTER
STREAMLINED
BETTER
MODERN DESIGN

**ANDERSON** FIRE-FIGHTING
**EQUIPMENT COMPANY, INC.**
407 WEST 36th STREET NEW YORK 18, N. Y.

# SECONDS COUNT
## in fire fighting at 20° below zero



Scene above is of Boston Fire Alarm Headquarters. Chief Radio Operator is receiving verbal report of fire from Battalion Chief in his car at scene of fire.

## One of many reasons why Boston installed

**Motorola** **2-WAY RADIO**

• With a Motorola F-M Radiotelephone System, delays in locating the fire or in ordering equipment to the scene are ended. Battalion Chiefs are in instant touch with fire alarm headquarters.

**Fire Fighting With the "Handie Talkie"**—When Motorola Radio obligations to the armed forces are completely fulfilled, Battalion Chiefs will be in immediate touch with their men on the scene of action with the famous Motorola "Handie Talkie," an exclusive *Motorola First!*

**Boston Installs Motorola System**—The Boston Fire Dept. now uses F-M 2-way Motorola Radiotelephone, similar to the Motorola systems in use in 26 states. From Boston's Central Station, WEY, Fire Alarm Headquarters speak directly to the fireboats and 30 mobile units, Motorola equipped.

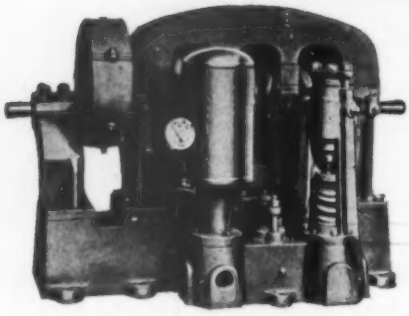
Now *your* Fire Department can also have its own modern Motorola radiotelephone system with certain limitations.

**WRITE *today for full details***

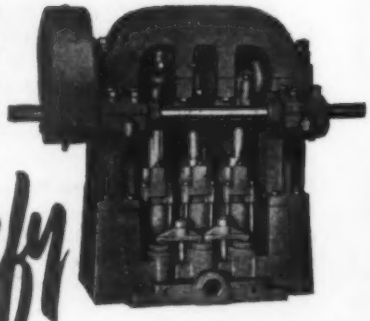
# GALVIN MFG. CORPORATION • CHICAGO 51

**F-M & A-M HOME RADIO • AUTO RADIO • AUTOMATIC PHONOGRAPHS • TELEVISION • F-M POLICE RADIO • RADAR • MILITARY RADIO**

*We shall appreciate your mentioning* FIRE ENGINEERING *when writing advertisers*



● Above is the Hardie LCXA Pump delivering 60 gallons at 130 R. P. M. with nozzle pressure of 800 P. S. I. At right the Hardie XCXX Pump delivering 35 gallons at 118 R. P. M. with nozzle pressure of 800 P. S. I.



Specify

● When you buy your Fog Fire Fighter, or convert an old truck into one, make sure that you get a unit that can deliver the volume and the pressure that you must have to get all the advantages of this revolutionary new fire control method.

Specify a Hardie High Pressure Pump and a Hardie Fog Gun and no matter what else you have you will get 35 to 60 gallons per minute at 500 to 800 P. S. I. at the nozzle. The amazing new Hardie Gun provides single-trigger control and quick easy stream selection from a blasting solid stream to a true finely atomized fog.

Leading fire control equipment manufacturers use and install Hardie pumps. We will gladly send you additional data.

**THE HARDIE MFG. COMPANY**

**Hudson, Mich. Los Angeles, Calif. Portland, Oregon**

**Canadian Distributor C. W. LEWIS, Grimsby, Ontario**

# ★ H ★ A ★ R ★ D ★ I ★ E

*High Pressure* **PUMPS AND FOG GUNS**

**for Fog Fire Fighters**

*Please mention* FIRE ENGINEERING *when writing advertisers*

# The SEAGRAVE QUAD

Efficient and dependable. Has every refinement of Seagrave design and Seagrave construction that makes it the most outstanding model in its field. Powered with Seagrave built motor. . . . Has double ignition system, double fuel pumps, double fan belts.

You can always specify Seagrave Apparatus with full confidence that you will get more for your money in engineering skill, mechanical perfection and dependable performance.

Seagrave

THE GREATEST NAME IN FIRE APPARATUS

**THE SEAGRAVE CORPORATION**
COLUMBUS, OHIO
Bickle-Seagrave, Ltd., Woodstock, Ont.

# In a Minute and a Half···

Official U. S. Navy Photograph

*The total output of AER-O-FOAM has been taken by the U. S. Navy, for many months, but we are now able to offer a limited quantity for civilian use.*

This Hellcat burst into flames as it approached the carrier. Efficient fire control extinguished the flames saving pilot and plane.

## For Gasoline, Oil and Similar Serious Fires FOAM

### is the Acknowledged Extinguishing Medium

Water in various forms and small extinguishers are valuable aids in helping to control fires until Foam can be applied.

For hazardous oil fires, Foam is the recognized effective means to quench the fire and prevent flashbacks.

Our engineers will be glad to consult with you and recommend the type of Foam and equipment best suited to your needs.

**In Fire Department Service**

National Foam System has equipment especially designed for the use of Fire Departments to meet all types of fire fighting requirements. Complete engineering service available.

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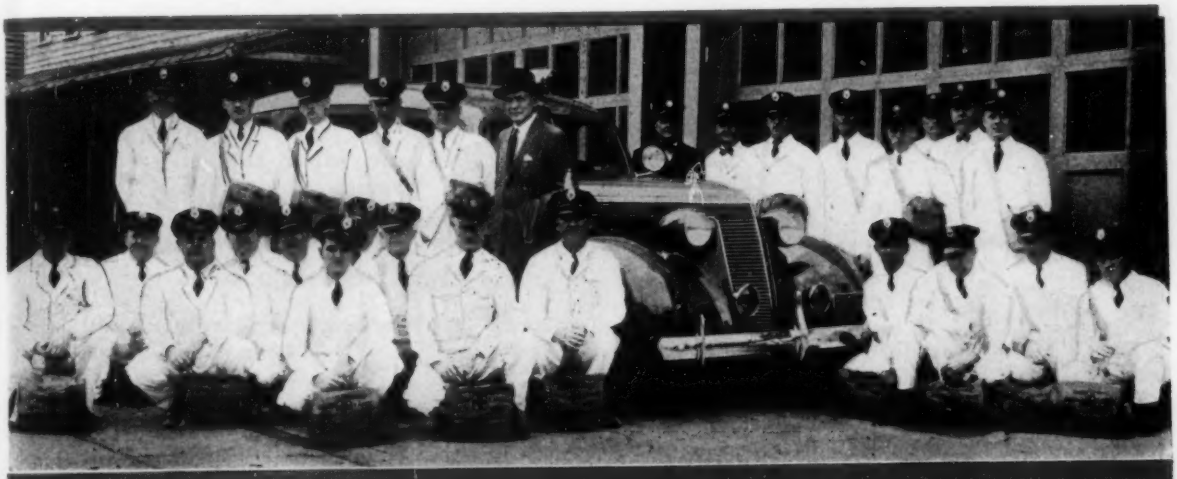

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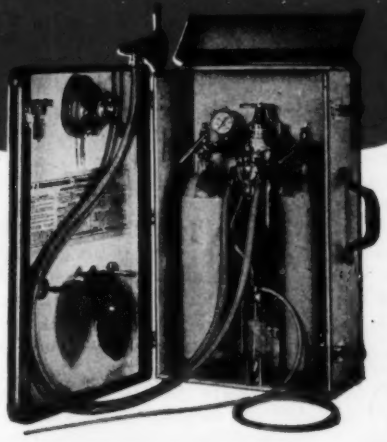

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This "Putt Putt" was a Homelite Portable Generator, installed in the plane as an auxiliary power plant and used for ground work only. The crew didn't think it would start because of lack of oxygen at this high altitude. But they tried . . . and it worked. Their electrical system was restored. They accomplished their mission. And then sat down and wrote us about it.

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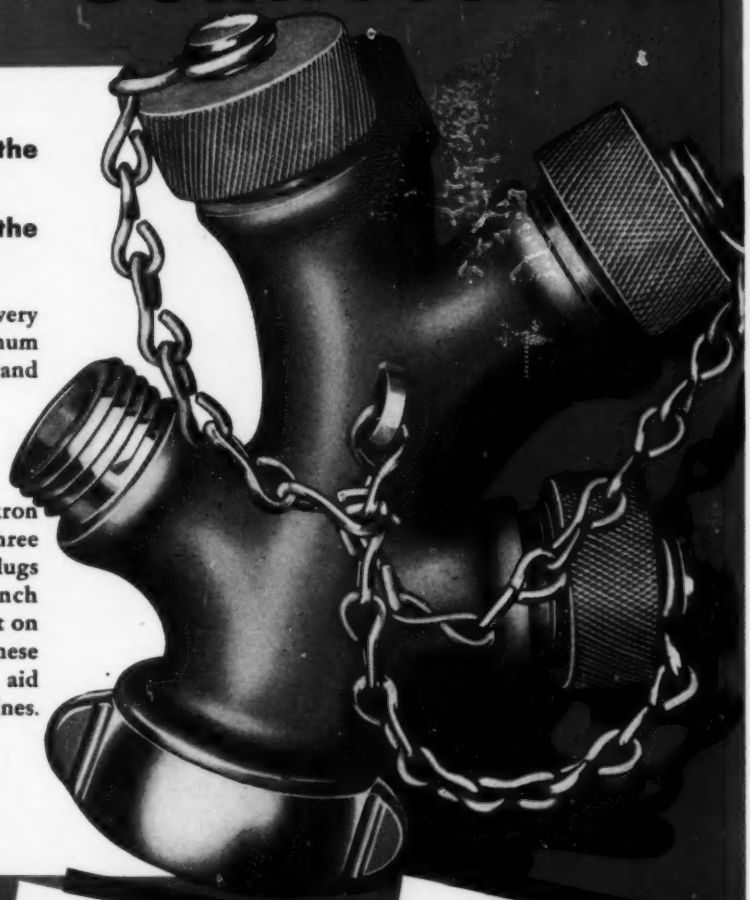

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Three outlets

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FIRE FIGHTING EQUIPMENT

THE GAMEWELL COMPANY
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FIRE ENGINEERING

JANUARY, 1945 VOL. 98, NO. 1

# With the Editor

**Message to Congress** Members of the Senate and House of Representatives have been sent recommendations by the International Association of Fire Chiefs for the final disposal of civilian defense war emergency fire fighting apparatus.

These recommendations, which have been published in this and other fire service journals, represent the best thinking of the special committee formed to study the problem, and suggest a solution. The committee, headed by George W. Booth, Chief Engineer of the National Board of Fire Underwriters and including George Richardson, International Association of Fire Fighters; Fred Shepperd, International Association of Fire Chiefs; Warren Kimball, National Fire Protection Association and Roi Woolley, FIRE ENGINEERING, drew up its recommendations following extensive surveys covering the distribution, application and use of the OCD equipment in cities, towns and villages, and the Armed Forces. From the first, the committee had the wholehearted assistance of Colonel Edward L. White, Chief, Protective Property Division of the Office of Civilian Defense, who is in complete accord with its findings.

What action the congressmen will take on the subject cannot be prophesied at this time. There are already a number of bills either before the House or Senate, or in Committee, which have a bearing upon the disposal of OCD material. Meanwhile, other groups, not directly a part of the fire service, have been giving the matter study and some of them have prepared their own recommendations as to what shall be done. Among these is the National Fire Waste Council of the United States Chamber of Commerce and the Agricultural Committee of the National Fire Protection Association, which met in Chicago in December.

In the main, there appears little difference between these recommendations and those of the committee, sent to Washington through the I. A. F. C.

It would be regrettable if there should be any wide disparity of opinion because of the effect it would have upon those charged with the ultimate disposal of the equipment. Now, if ever, there should be unanimity of opinion and action on the part of the fire service, and those whose interests are bound up with it.

**A Peril in Reconversion** The country is giving thought to reconversion. This takes many forms, one being the search for new products.

In the past few weeks FIRE ENGINEERING has been visited by representatives of a number of manufacturers and marketing and sales agencies, who have sought information on the markets for fire protection and fire prevention materials and products.

Some of these inquiries come from large manufacturers with extensive research and laboratory staffs; others from unknowns.

It is obvious that the post-war fire service will see the introduction of new products, from chemical extinguishing agents to new types of motor fire apparatus. All of these products should have the interest and attention of forward-thinking fire service officials —some because they will be worth adoption by the fire service and others because they may not be entirely suitable for fire department use.

As our readers know, FIRE ENGINEERING has always stood for "standard" fire fighting equipment and has strenuously opposed the use of anything "non-standard," no matter what, or who made it.

However, it should be remembered that there may be some "fire fighting" devices

sold direct to householders through retail or mail order channels and over which neither this publication nor the fire service have any control. Those who may sell them know little or nothing of the science of fire fighting. They are only interested in such articles as "merchandise." Misunderstanding of the use or merits of these devices or materials by the consumer-purchaser may prove disastrous.

Here will be an opportunity for the conscientious fire chief, inspector and fire marshal to exercise judgment by checking with their local dealers, taking them into their confidence, demonstrating to them the dangers incidental to merchandising anything in the nature of fire preventive or fire protective equipment that is below standard.

**Gag Rule Held Legal** Has the head of a fire department the right to forbid firemen under his command to make public statements without written permission?

An answer to this question has been given by Justice Isidor Wasservogel in the Supreme Court of New York in deciding that Fire Commissioner Patrick Walsh's enforcement of the rule promulgated in his department some time before, whereunder he had disciplined a member of the force, was "reasonable exercise of the Commissioner's right to prescribe rules and regulations affecting the discipline of members of the department."

The Justice dismissed an action brought by the Uniformed Firemen's Association in which it was alleged that the rule was unconstitutional and was invoked in May as a result of the Association's suit to relieve firemen of an extra-duty order issued by the Commissioner.

"The Commissioner," said Justice Wasservogel, "had the right to verbally inform members of his department of his intention to enforce the rule."

It is reported that Counsel for the Association will appeal the decision.

**Commissioner Reilly Speaks Out!** In the November issue of FIRE ENGINEERING we told how Commissioner W. A. Reilly of Boston was misquoted by the local press on the subject of the value of OCD emergency fire fighting pumps which by inference attributed to him the claim that these OCD 500 G. P. M. pumps are the equal of the best standard 750 G. P. M. fire department types.

In our editorial we told how the Commissioner categorically denied the newspaper account and had offered to put his denial into type.

True to his word, Commissioner Reilly has done this—and in no uncertain terms. So unequivocal and illuminating is his statement, sent the editors, that the International Association of Fire Chiefs is reprinting his statement in full in the January issue of its Fire Chief's News Letter. Fire officers, commissioners and other municipal authorities who are concerned with the final resting place of civilian defense wartime emergency apparatus and equipment will do well to heed Commissioner Reilly's experience, and take his message to heart.

**Watch Those Emergency Laws** The end of the war will mean the end of the laws legalizing mutual aid and disaster control in many states.

Some of these wartime emergency acts are deserving of perpetuation and it would be regrettable if their benefits should be lost to the fire service in the readjustment that will inevitably follow V-Day.

Local, county and state fire service organizations will do well to review their wartime emergency legislation and take the necessary steps to continue that which is truly beneficial.

Fred Shepperd

# The Post-War Fireman*

By FRED SHEPPERD

MAJOR changes we may expect in post-war firemen will be those in skill and in knowledge required to cope with newly developed hazards incidental to new products of industry, new processes and war-created maladjustments. In the latter category would be included the re-populated defense housing developments, idle plants and neighboring commercial establishments facing disaster from loss of trade.

Some 20,000 Pounds of Magnesium Burned in This Los Angeles, Cal., Fire

Each newly created hazard will require on the part of the fireman an increased knowledge covering the methods of handling the hazard. Each new product presenting a fire hazard must be known by the fireman, as well as the methods to be employed in fighting fire involving it. Each new hazardous industrial process must be understood, so that means of protecting life and property may be determined.

But before entering into a discussion of what may be expected of firemen in post-war years, a brief review of what has taken place in the past twenty-five years in regard to fire department personnel will be of value in determining the trend.

Twenty-five years ago, requirements for entrance into the fire service were low in comparison with those encountered today. Civil service was then in its swaddling clothes. Comparatively few fire departments were under its protection. Firemen as a class did not stand high in public esteem. Continuous service was then in vogue, and compensation was comparatively poor.

In the intervening twenty-five years civil service and the two-platoon system have been generally adopted. These advancements, together with increased pay have attracted a much finer class of men to the service. For example, in a recent examination for entrance into the New York Fire Department, fifty-eight out of the first hundred men who made the eligible list were college graduates.

This improvement in personnel has resulted in a marked improvement in the attitude of the public toward firemen. Of all civil employees today, firemen stand first in public esteem.

This trend will continue.

Organized education of the fire service will continue to advance, and the demands made upon it will increase in pace with industrial advance.

We may expect firemen to devote more time in self-preparation for civil service examinations. Such examinations have in recent years continued to increase in difficulty. This has been necessary in order to weed out all but the best fitted for the service. One example will illustrate this specific point. Some years ago when New York City first adopted hydraulic questions in civil service examinations, few could answer them. But with the influx of better educated young men, it was soon discovered that most of the candidates were getting 100 per cent on the hydraulic questions; and it was difficult to so rate them that there would not be a large group having the same final rating. In order to solve this difficulty, hydraulic questions were made more difficult, and thus a smaller number were able to answer all correctly.

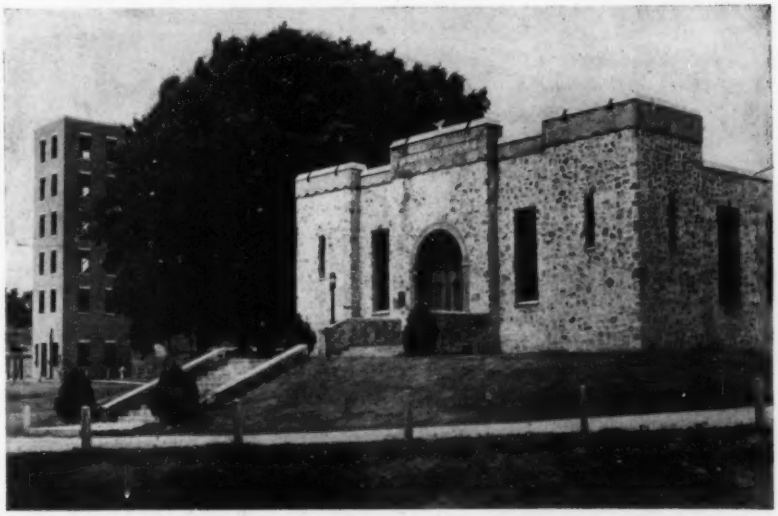
As the candidates became better prepared in the future, examination questions in this subject may be expected to become even more difficult.

The same trend may be expected in other subjects included in civil service examinations.

For that reason, as well as for the reason that the job of fireman is becoming more desirable, future examinations will be stiffer and the candidates will have to devote more time to preparation.

## Fire Colleges

Fire colleges have done an excellent job in the past in improving the caliber of fire department members. Such schools as the Illinois Fire College, the



One of the Modern Fire Colleges—the Palmer Fire School Located at Charlotte, N. C.

*Paper presented before the Fire Department Instructors' Conference in Memphis, Tenn., on January 9.

Oklahoma Fire College and others have accomplished a great deal in advancing the knowledge of the fire service. Such colleges may be expected to increase in number and in importance in the field.

### State Fire Schools

State fire schools, similar to those held in the State of Pennsylvania, are bringing fire department training to the volunteers, as well as to paid members of the fire service. Each year improvement is noted in the course of study, in the drills and demonstrations given in these schools. They have proved a major factor in education of the fire service in the past, and may be expected to prove an even greater influence in the future.

The county and local fire schools perform in a more limited way the work done by the state schools. Some of the county organizations have performed excellently in extending training to all firemen within the county limit.

### Fire Department Schools and Colleges

Many of the larger fire departments maintain fire schools and colleges for the development of their own men. Each year sees a marked advance in the courses provided and in the effectiveness of the work of these institutions.

A few of the larger fire department schools have been the real pioneers in the educational movement of the fire service, and they deserve no little credit for the work they have done.

Some colleges have realized the highly specialized nature of fire protection and have installed special courses in fire protection and prevention. Probably the best known of these is the course given at Illinois Institute of Technology, formerly the Armour Institute of Technology. City College of New York and New York University just prior to the war established courses for fire fighters, but these have been discontinued for the time being. Rutgers University in New Brunswick, New Jersey, also started such a course but discontinued it when we entered the war.

The annual conferences and conventions of the various fire fighters' associations continue to disseminate information on fire prevention and fire fighting and may be expected to carry on this effective work.

Finally, a word should be said about the flowing spring of the fire department training material; the Fire Department Instructors' Conference. A review of the programs of this organization show a very wide coverage of the field, and in a highly practical way. If Dick Vernor had reviewed the past programs of your conference, he could have better described the post-war fireman than the speaker, for he and his group of efficient co-workers are molding our post-war firemen. The work of the Instructors' Conference exerts an influence not only upon those who attend it, but upon the entire fire service, for the material presented before the conference is broadcast far and wide by its membership. After all, any progress made in improving the fire department personnel must come through the instructors, and by training instructors you are developing a fountain-head of information, which, by augmentation at the annual conference, will never dry up.

### Post-War Development

Each new problem which develops in the matter of fire protection has a direct effect upon the personnel of the fire service. Firemen must be fitted to handle new hazards which occur as a result of industrial development or other change.

With the resumption of peace-time manufacturing, many new products will appear on the market, some the result of war developments and others, the result industrial research.

Just a few of these might be mentioned as typical.

After the war we will have a huge synthetic rubber industry. One of the ingredients used in the manufacture of of synthetic rubber is butadiene. This volatile liquid produces a fire which is extremely difficult to control. Furthermore, the liquid vaporizes so readily, produces a heavy, explosive vapor, that special technique in handling fires involving it may have to be developed. At the present time, when a butadiene storage unit opens up or the liquid is otherwise freed, and ignited, attention is directed chiefly to protecting exposures. No attempt is made to extinguish the fire, for if the fire were put out, the gas would continue to evaporate very rapidly and a blanket of it might flow along the ground to a source of reignition. A tremendous explosion might result.

Magnesium, a light metal used in the manufacture of incendiary bombs, and war plane parts has reached huge proportion. This productive capacity will be available after the war for peace-time products.

Because of its lightness in weight (it weighs one-third less than aluminum) and because of its strength, it may find its way into many articles of commerce.

Its chief hazard will be in connection with process of manufacture, where finely divided magnesium is produced.

A magnesium fire of size is extremely difficult to extinguish, and explosive reactions may take place.

This latter hazard is well illustrated by an occurrence at the Dow Chemical plant in Midland, Mich., last August, when a test set of 1500 pounds of magnesium castings was blown into the sky by an explosion.

Liquefied gas, such as was employed at Cleveland, Ohio, where the disastrous explosion and fire occurred last year, may come into more general use. This method of storing natural gas (liquifying it by refrigeration) is much more economical than storing it in the common water-sealed tank. If the new method is generally adopted, a new series of hazards will be encountered.

Plastics, although widely used today, are still in their infancy. As a result of the successful employment of plastics in war products, they may find common use in furniture, automobiles and many other common articles of the future.

It is not only possible, but probable, that automobile bodies will be made of this material in the future. While most plastics are not inflammable, or not highly so, many still rate as serious fire hazards. Just what the future has to offer in this field cannot now be predicted. But it is a development which deserves careful watching.

Many substitute materials have been developed during the war due to the inability to secure critical materials. In many cases, the substitutes have proved so economical and satisfactory that they may be expected to find increased use after the war.

Many of the substitutes will represent severe fire hazards, such as impregnated fiber used for soles of shoes. Where an oil is employed which possesses a tendency toward spontaneous ignition, a serious fire hazard is created.

A review of the few products listed above which may be commonly employed after the war will indicate that the fireman of the future will need continual and extended instruction in post-war materials and products. He will

**A Typical Airplane Crash. This Occurred at Sioux City, Ia., on December 3 of Last Year, and the Resulting Fire Damaged a House and Garage**

have to absorb considerable information on chemistry if he is to be fully qualified to handle the multiplicity of new fire problems with which he will be faced.

Just as newly developed chemicals and materials create new hazards, so do also new processes of manufacture. It will fall the responsibility of the fire service to suggest controls for the fire hazards introduced in new processes, and to see that their suggestions are adopted. But before this can be done, it will be necessary that the fire service be familiar with the inherent hazards and with the methods of preventing or controlling them.

Thus again additional knowledge on the part of the post-war firemen will be demanded.

## War-Produced Hazards

When the war ends, and the manufacture of war munitions stops, there will be many idle plants. It is not likely that a majority of these industrial establishments can be converted to peacetime actvities. The result will be a large number of idle plants, which will constitute a real fire hazard. It is only necessary to review the history of the cotton manufacturing industry in New England to realize what happens when plants are abandoned. In that section of the country were located most of the American cotton goods factories. With the advent of increased labor costs in New England, a large number of the establishments moved to the southern states, leaving many deserted plants. Because these institutions no longer produced revenue, no money was spent on them. Watchman service was abandoned, sprinkler systems were shut off, or even removed, and other fire protection measures discontinued. The series of great fires in cotton mill buildings in New England during recent years was the result.

Even if all defense industries are ultimately replaced by peacetime factories, there will be a period when many of these plants will be unoccupied. In such communities the fire department will have the additional responsibility of making frequent inspections to prevent fire.

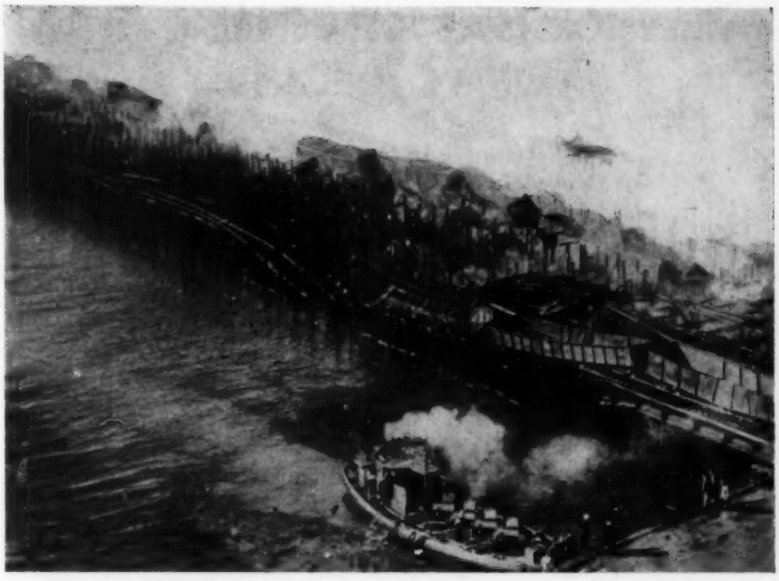
Another hazard with which the fire service will be faced due to the cessation of operation of defense industries, will be the de-populated defense towns or areas.

These areas have been built up almost entirely of low cost frame construction. When unoccupied they will constitute a real fire threat, due to the danger of conflagration.

Business establishments in certain defense areas, after the war, will come face to face with hard times, due to departure of workers and to loss of income by those who remain. Business will shrink; the unscrupulous businessman may attempt to recoup by "selling out to the insurance company." Again the responsibility will rest with the post-war fireman to devise means of guarding against such fires.

## Arson

It has been estimated that over half of the nation's annual fire loss is of incendiary origin. If that is correct, then arson control ranks ahead of fire prevention from the standpoint of potential reduction of fire loss.



**Seven-Hour Fire Totally Destroyed Pier, Freight Cars and Contents at Newport News, Va., Port of Embarkation. Note Coast Guard Fireboat Mounting Eight Trailer Pumps with Outboard Suctions**

While some progress has been made in recent years in developing cooperation on the part of the fire service in detection, investigation and prosecution of arson, a great deal still remains to be done.

The firemen of the future will be far better posted in methods of detecting evidence of arson as well as presenting testimony in court in a way that will facilitate conviction of arsonists.

The fireman of the future will have to know a great deal more about methods employed by fire bugs as well as details of arson control than he has in the past. He is the man who is first at the scene of a fire, and is thus in best position to discover and preserve evidence necessary to secure conviction. Photography will likely be used on an increasing scale in arson control work.

Here again there is opportunity for specialized training of the post-war fireman.

## Post-War Building Problems

As defense areas are de-populated, following the end of the war, other areas will experience an influx of population. Providing accommodations for these newcomers will be a big task. Residence construction, except for defense areas, has been at a standstill for nearly three years. It is estimated that post-war housing construction will range up to 2,000,000 houses per year for ten years following the war.

This will constitute a real boom in residence building. Such a boom will be accompanied by a development of fire hazards inherent to competitive construction. Here again the post-war fireman must be qualified to detect faulty construction and enforce building construction ordinances.

Some developments may be expected which will be beneficial from the standpoint of fire protection. Fire resistant wood will likely increase in use in post-war building. A number of manufacturers are today turning out chromated zinc chloride and other fireproofing liquids. Woods used in building construction can easily be treated with these chemicals and a structure constructed of such lumber is quite resistant to the spread of fire.

Just as cities have enacted anti-wood shingle roof ordinances, we believe the future will show a general adoption of regulations requiring the use of treated wood in all frame structures within the built-up sections of cities.

The advent of such a development will materially lessen fire losses in connection with dwelling fires.

It is also probable that glass brick, as well as other non-combustible materials, will find wider use in structures erected after the war. While such a trend will reduce the likelihood of rapid spread of fire, still the contents of structures will remain much the same as they are today. As we all know, no building, no matter how fire resistant, can be considered safe against fire if the contents thereof are combustible.

## Aircraft Fires

Prior to the war, the airplane crash fire was a rarity. After the war, however, such fires may be commonplace. The nation has gone air-minded as a result of the tremendous growth of aviation for military purposes. At the present moment, the Civil Aeronautics Authority is planning 3,000 new airports and landing fields as post-war projects. No community of any size will be without an airport.

Furthermore the number of qualified pilots, following the war, will run into hundreds of thousands, to say nothing of the great number of our armed forces who will have served as crews of planes

(*Continued on page* 40)

# LARGE KANSAS CITY FIRE DUE TO DELAYED ALARM

## Fire Department Battles Near Conflagration That Caused Two and a Half Million Dollar Loss

Staff Correspondent Report

CRASHING walls, explosions and flames shooting 200 feet above a loft building in the north end of Kansas City, Mo., marked what is said to be the city's worst fire since the stockyards conflagration of 1917 and gave its firemen one of their toughest battles, on December 27, 1944.

According to Director Francis B. Wornall, the fire started from unknown causes, in the basement of the five-story structure occupied by S. C. Johnson, Inc., wax company, and other firms, at No. 710 Central Street, on the southeast corner of Seventh and Central Streets and before it was extinguished, it had involved several other buildings including a drug company and two printing plants.

### Combustibles Feed Flames

Besides containing huge drums of wax, stored by the Johnson firm, the loft was heavily stocked with chemical and pharmaceutical supplies of the Sharp & Dohme Pharmaceutical Company, in cartons and bulk. There was also a large storage of furniture and housewares of Peck's, Inc., in the structure. Across the street on the northeast corner, was the five-story building of the McPike Drug Co., while on the northwest corner was a three-story brick structure, the ground floor of which was occupied by a printing plant. Narrow alleys separated the loft building from others three to seven stories in height, occupied by printing, textile and other concerns.

### The Usual Delayed Alarm?

The origin of the fire has been given as somewhere in the basement of the five-story loft. This building was sprinklered but there was no automatic alarm connection between it and the A. D. T. office. The sprinkler alarm was said to have sounded at 2:00 A. M., notifying the building watchman of the fire, who, in turn, was expected to summon the fire department either through the A. D. T. office call box system, or by means of telephone or nearest fire alarm box. The watchman is said to have reported that he did not call the fire department after hearing the sprinkler alarm because he could not find the fire. Other reports suggest that at that time the fire was confined to a three-foot space between a false basement ceiling and the first floor, and almost directly beneath large storage drums of wax belonging to the Johnson Company. The fire remained trapped in this space for some time, where firemen had great difficulty getting at its seat.

The first alarm was turned in by the district police car at 3:53 A. M. The second alarm was timed at 4:45 A. M. and the third alarm at 5:52 A. M. By 9:00 A. M., following additional calls, practically every available pumper company in the city was at the fire, all but four of the forty fire companies in the city having moved. In addition, two companies were called from Kansas City, Kans., by Director Wornall, as soon as it was seen that despite the stubborn battle put up by the local firefighters, the fire was continuing to make headway.

View Shows Destroyed Loft Building and Corner Structures Which Were Damaged in Kansas City Two and a Half Million Dollar December Fire.

### Fire Threatens Wide Area

Judging from reports, there is somewhat of a similarity between early stages of this fire and that of the Baltimore conflagration. Both had their origin in the basements of buildings which were not greatly dissimilar. It may be remembered that in the Baltimore fire, the fire department was at first believed to have the fire under control in the basement of the Hurst building when suddenly it spread throughout the structure, driving out the companies and quickly involving exposures.

In the Kansas City fire, it is reported that after a four to five hour struggle, during which increasing units of the fire force were called into action, the flames "roaded suddenly from the windows of the three lower floors" given the twenty and more companies then at the scene a fight reminscent in many ways of that waged by their Baltimore brethren.

With the warehouse fully involved, the fire spread to the structures on the other corners, and to the near sides of buildings to the south, across the alleys.

### Radiated Heat Destructive

Evidence of the terrific heat generated by the burning wax and other combustibles is seen in the fact that at the Folger Coffee Company main building at 330 West Eighth Street, plate glass windows cracked and fell onto the canopy of the May Street side, almost two blocks from the fire. The inferno of white hot flames also broke windows out of the adjoining buildings and, in some, set off sprinkler systems which, while helping to prevent extension of the blaze, added to the water losses.

Once completely a prey to the flames, the floors and walls of the warehouse fell—the north wall so quickly that some fire apparatus and equipment was destroyed or damaged. It is reported that one turret wagon, which was operating with four lines of hose on the fire building, was knocked out of action and heavily damaged by the falling north wall. Besides the smashed turret, two cellar pipes, several hundred feet of hose and other miscellaneous fire department equipment was lost to the department. Accounts state that failure of a pumper at a critical period in the progress of the fire, permitted it to make headway until it burst from the windows of the three lower floors, driving the firemen before it. No. 1 ladder truck had a narrow escape, losing the paint off one side before it could be moved to safety. It was operating a ladder pipe on the fire building which complicated the problem of its speedy withdrawal.

### Fire Apparatus Damaged

Captain Carter Emert of No. 14 company managed to back his truck to safety when it was partly caught by the north wall section when it crashed into

Seventh Street. He was reported seriously burned and was rushed to a hospital.

Three members of the Kansas Citv Department are given credit for playing a major part in saving the McPike Drug Company building from further loss, according to District Chief John J. Nee of the Department. They carried a 2½-inch line into the burning structure and under great difficulties directed it on the blazing areas. They were Captain George Hilson of No. 10 Turret; and Claude Davis, driver, and Captain Sam Passcuzzi of Engine Co. 25.

### Emergency Forces Mobilized

In addition to the two companies summoned from neighboring Kansas City, the Red Cross and other local emergency services rendered aid. All available fire and police forces were mobilized.

Four firemen were injured, one, Captain Emert of No. 14 company, reported burned critically.

It took twenty-five streams to bring the fire under control, which was accomplished at about 10:30 A. M. However, at 7:00 A. M. Thursday morning, twenty-seven hours after the fire was discovered, firemen were still operating two turrets, one deluge set and two hand lines to control the fire in the basement full of ruins of the loft building.

The quantities of water poured into the buildings involved, and to cover exposures, resulted in overflowing sewers and slush covered streets, adding to the difficulties of the firefighters. Rain, which fell at mid-morning on the day of the fire, added steam to the smoke clouds which blanketed a large area, being carried as far as Main Street and which could be seen for miles.

### Losses Over Two Million

Damages estimated on four of the buildings involved, ran well above two and a quarter million dollars. The southwest corner loft alone suffered an estimated loss of that amount to building and contents, including $150,000 to furniture and housewares in the Peck's Inc. storeroom there. Loss of $100,000 to the northwest building, McPike Drug company, was given by Mr. A. G. McPike, head of that concern. This was principally due to smoke and water damage. Following the fire, water was more than a foot deep on the lobby floor. When the flames spread to this structure, its 122 employees fled the building.

Damage to the southeast corner property at 701 Central Street, was estimated at $30,000 by William R. Brown, vice-president of the Charles E. Brown Printing Company which occupied the first floor. Sixty-five employees fled from this building. L. J. Navran, president of the Burd and Fletcher Company, 327 West Seventh Street, estimated a $10,000 damage to the five-story printing concern across the alley to the west of the original fire. Damage was confined chiefly to windows and the near wall, a favorable wind direction aiding the firemen to potect this structure. There was no estimate of the damage to the seven-story Kansas City Textile Products building at 306 West Eighth Street, across the alley, south of the original fire. Windows of this building were out on the first four floors and there was some loss of equipment, products and building on the side nearest to the fire building. This company makes tens for the quartermaster department.

**Firemen Withdrew to Safety Before Remaining Walls of Kansas City Loft Building Crumble Under Intense Fire Fed by Wax and Chemicals.**

### Priceless Blood Plasma Lost

The loft building and warehouse, where the fire originated, covered a quarter of a city block and had 125,000 square feet of floor space. It was valued at $250,000. The pharmaceutical company's quarters in this building contained $250,000 worth of drugs, including 400 pints of blood plasma, sulfa drugs and serums. There were also several clothing firms housed on the property which was said to be one of the best known loft structures in the city.

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## Firemen Quit Over Union Trouble

Four officers and one first class firemen, members of the Oklahoma City Fire Department, are reported to have resigned their jobs in a fight between city officials and sponsors of a new firemen's union in that city. Mass meeting were held by other firemen to discuss further resignations.

From all accounts, the trouble grew out of the effort to organize the members of the department, which already had one union group. Both city manager C. F. Aurand and Fire Chief G. R. McAlpine have refused to be quoted for publication except to say that there appeared little danger of a walkout of the men "because their charter and by-laws specifically prohibit such things."

It has been disclosed, according to the press, that the new organization was chartered in October, following several unsuccessful attempts in past years to form a fire department union in the city. The union claims 132 members—slightly more than half of the department personnel. According to reports, city manager Armand previously advised the firemen that the city council's policy is not to recognize a union in any department and added *"I can do nothing but adhere to that policy."*

As an alternative to the union organization, Chief McAlpine advised the firemen several weeks before the resignation of the officers that he did not object to "an organization" of the firemen among themselves, so long as it was not affiliated with any union, and restricted membership to personnel of the city fire department.

At this writing the outcome of the secret meetings held by the firemen and officers has not been disclosed. It is known, however, that at least one union organizer from Tulsa, Oklahoma, had been working in the city among the firemen.

# Current Techniques in Fighting Aircraft Crash Fires

**Editor's Note:** ***This is the concluding installment of Mr. J. E. Taplin's article on latest methods developed by airport firefighters. The opinions expressed by Mr. Taplin are not necessarily those of the Editors.****

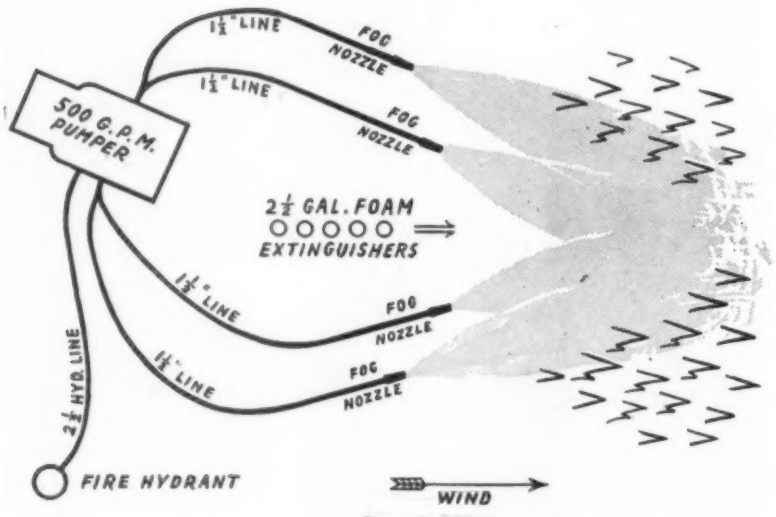



Figure 7

AN inventory of apparatus and equipment, suitable for crash fire fighting, now possessed by the average municipal department would reveal the following: One or more pumper trucks, each with booster tanks; foam equipment, such as hand extinguishers, foam generators, and possibly hip packs; two or more fog nozzles, and enough 1½" hose for the required number of working lines; as well as adapters, wye connections, etc., sufficient in number to make the layouts illustrated. Judicious use of the items enumerated above will enable city fire departments to do a creditable job in the control of an airplane crash fire.

## Lack of Water a Handicap

The greatest handicap at crashes occurring outside the city limits is the lack of water, as that carried in the average booster tank will be exhausted in two minutes or less, which is far too little time for effective control. Fortunate is the fire department having a truck equipped for rural fire fighting, with a tank capacity of 500 gallons or more, to supplement their water supply.

Generally, the work of the municipal fire department will be more effective at crashes occurring within city limits, because water from nearby fire hydrants is in most cases always available. Emphasis is placed on the *necessity* for *laying* a *hydrant line* to the crash, which under normal conditions of pressures and length of stretch will usually furnish all the water needed for continuous operation. The following plans are illustrative of practical layouts which may be used effectively.

*These diagrams should be studied along with those in the December issue.

## Figure 7

Figure 7 (left) indicates how one 500-gallon pumper can be used to supply four fog streams, with a discharge of approximately 150 GPM. A 2½" line from the nearest fire hydrant will supply water for continuous operations. The pumper is preferably located near the crash, so that all equipment is available for instant use. As many 2½" gallon foam extinguishers as are available will blanket considerable surface.

## Figure 8

Figure 8 (below) illustrates the use of one 750-GPM pumping engine to supply four fog streams and two hip packs, or a foam generator. A medium length of line from a good hydrant will still furnish adequate water for the equipment in use.

## Figure 9

The use of two pumpers, each laying its own hydrant supply line, is shown in Fig. 9 (see next page). Two fog streams and one booster line are placed in service from each. One booster line supplies a hip

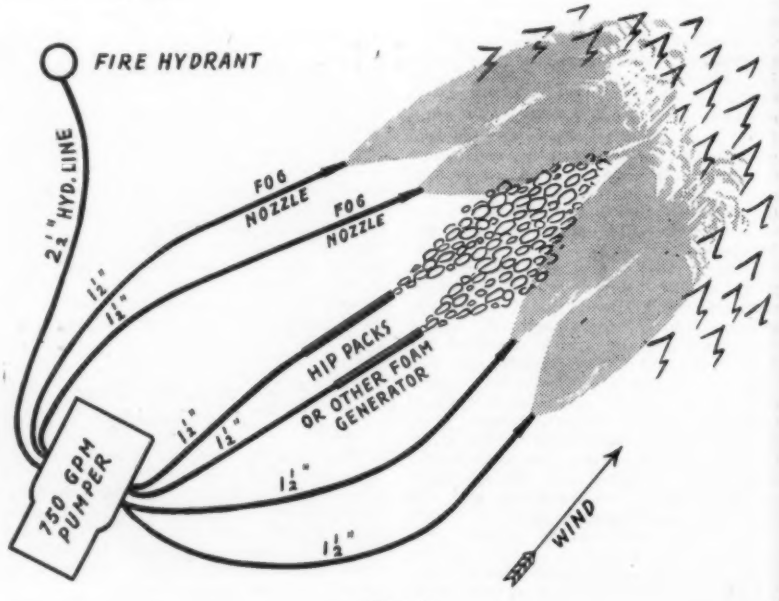



Figure 8

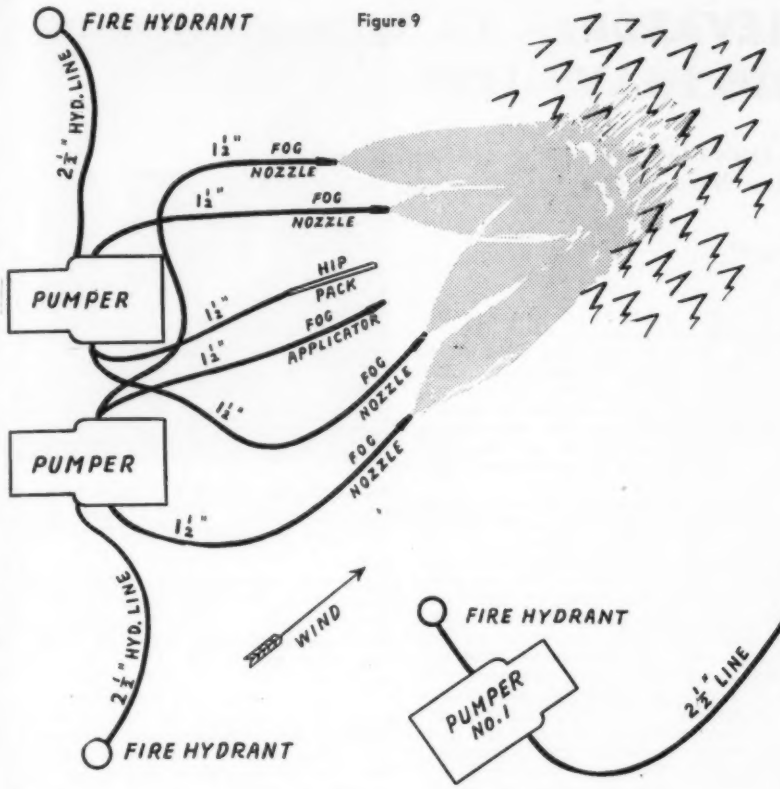



Figure 9

pack unit and one a fog applicator, or both may be used for hip packs. The fog applicator is merely a fog head on the end of an eight- or ten-foot length of pipe, the nozzle end of which is slightly curved. It is useful for inserting through openings in the fuselage for extinguishing fire or for protection of occupants. It may also be used for protection of rescue men as they enter the burning area.

## Figure 10

When longer lines are required to reach the crash, it may be necessary to set a second pumper at the hydrant as indicated in Figure 10.

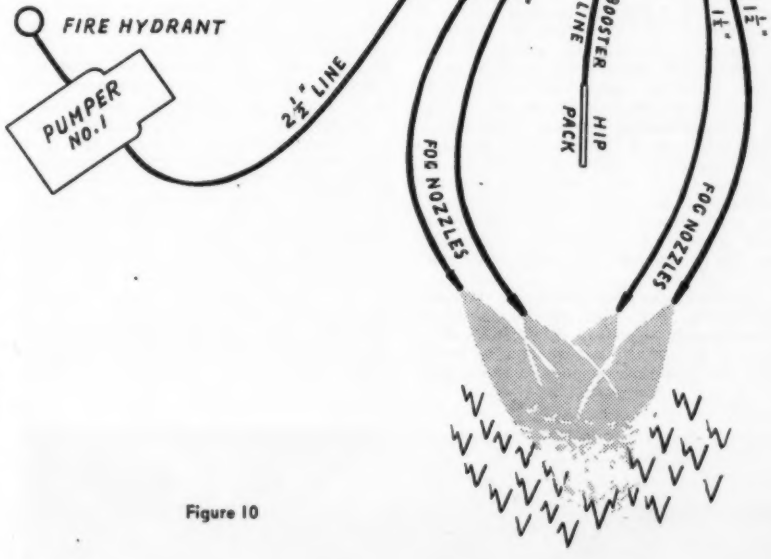
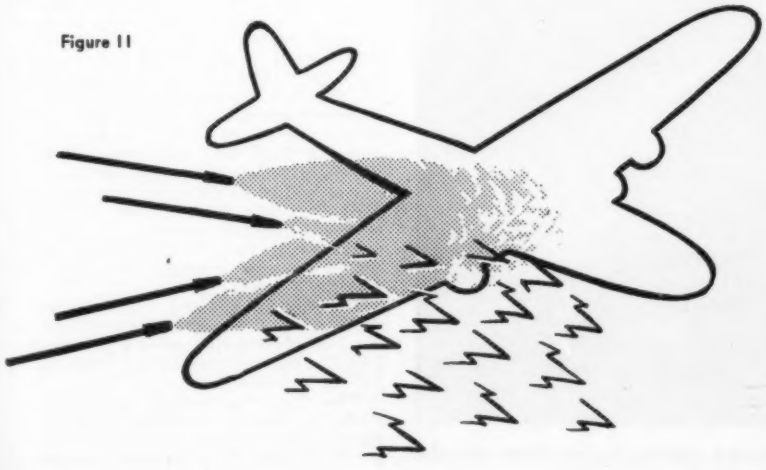



Figure 10

Figure 11



## Figure 11

It must not be inferred from the foregoing illustrations that all fires must be attacked through the center. How to use the fog streams or fog front to sweep burning fuel from a fuselage, and protect the occupants is shown in Figure 11.

The subject of protective clothing has been very briefly discussed, but nothing has been mentioned about forcible entry, rescue methods, types of planes and their construction, armoring, battery, and fuel tanks and locations, master switches, etc., a knowledge of each of which is most essential to members of crash crews. These and other related subjects will be covered in further articles in FIRE ENGINEERING. The primary purpose of this article has been to supply elementary information that may help municipal fire departments to better control not only airplane crash fires, but other gasoline fires as well.

Fire officers who want to take this subject seriously can find plenty of useful information (details of airplane models, construction, etc.) in current aviation journals, in publications and bulletins of the Civil Aeronautics Administration, the National Board of Fire Underwriters and the National Fire Protection Association. Two recent government publications are particularly valuable—if they can be obtained. These are War Department Technical Manual "TM5-315: Fire Protection by Troop Organizations in Theatres of War" and "TM5-316: Airplane Crash Fire Fighting." The latter was until recently "restricted" to government use but is said now to be available.

# CHICAGO GRAIN ELEVATOR BURNS WITH HEAVY LOSS

## Most Spectacular Fire Since 1939 Gives Chief Mullaney's Men Hard Battle

A Staff Report

FIRE on November 29th, which consumed Rosenbaum Brother's giant grain elevator in Chicago, was said by fire department officials to have been the city's most spectacular blaze since the million dollar conflagration which destroyed five grain elevators on May 11th, 1939 with a toll of five dead and 23 injured—18 of them firemen.

The structure which was wrecked was 100 feet square by 140 feat high and stood 1,000 feet east of the Chicago Belt Line railway tracks at 87th street and Stewart avenue in the Gresham Community section of Chicago. It had a capacity of 1,450,000 bushels and was reported to be almost full at the time of the fire. Besides the grain, it contained 600,000 bushels of soy beans.

The building's two lower stories were of brick construction; those above were of wood, sheathed in the conventional sheet metal, as is customary in elevators of the old type. Forty feet east of the elevator was a nine story feed mill and immediately to the south, the company's one story power plant. These structures were saved by prompt action of the firemen in covering the exposures with heavy streams.

The fire was discovered by Herbert Armstrong, a weigher working high in the elevator, at about 10:30 A.M. Employees in the mill saw smoke rising from the building about the same time and began a hurried exodus by stairways and elevators.

Most elevator fires are preceded by explosions, usually of grain dust. This particular fire, however, gave ample warning of its presence and all the employees escaped before the blast which, when it came, shook the area and blew out a large section of the elevator's east wall.

Scarcity of hydrants in the outlying area hampered the work of the firemen fighting the towering flames, which for several hours were visible from the distant Loop district, and as far away as Gary, Ind. According to Fire Commissioner Corrigan and Fire Marshal Anthony J. Mullaney, who was in charge, the widely spaced hydrants necessitated laying hose lines more than half a mile to points on 83rd street.

According to available reports, the fire, which necessitated a 5-11 and three special alarms, was fought by hundreds of firemen, including approximately 50 auxiliaries, using 68 pieces of regular fire apparatus and some OCD pumping units. The first alarm was received at 10:44 A.M. in the form of a telephone call to the effect that there was a fire at the Rosenbaum Grain Elevator. Within a few seconds, a box alarm for the same fire was sounded and the successive slarms were received as follows: 10:51—2-11; 10:53—3-11; 11:05—4-11; 11:20—5-11; 11:23—1st special call for 5 extra pumpers; 11:48—2nd special call for 5 extra pumpers; 12:42—3rd special call for 5 extra pumpers. At 12:35 P.M. a call was issued for OCD auxiliary pumpers.

Flames Roaring Through Rosenbaum Elevator, Chicago. Firemen, Working Under Many Handicaps, Saved Feed Mill and Power Plant.

A water tower and numerous deck pipes were operated to deliver heavy streams on the blazing and threatened structures. The tons of water pumped into the doomed elevator and on surrounding exposures quickly converted the surrounding prairie into a sea of mud, across which firemen had to lay plank roads for some of their apparatus. To complicate their task, snow fell during the four hours the flames raged out of control. They were reported checked at 2:30 P.M. when a large section of the elevator's south wall collapsed.

Twelve hose streams were played on the fire throughout the night of the 29th and watch lines were maintained in operation on the smouldering ruins for several days. One of the OCD skid pumps, mounted on an old hose truck of the department, is said to have worked for 60 hours with only a shutdown for change of oil, and for intermittent periods after that.

Despite the swift spread of the fire, six men working in the elevator and 109 in the adjoining feed mill reached safety. The only casualty was Fireman Stanley Paviek, 48, of Truck Company 42, who fell from a ladder and fractured his knee. Although no call was issued for auxiliary firemen, approximately 59 of them reported, dressed for duty. They were assigned to various tasks, mainly carrying hose and otherwise assisting the hard pressed regulars fatigued by having to handle the extra long stretches and the other fire fighting operations in the inclement weather. During the course of the fire, the OCD organization served hot coffee, sandwiches, chili and soup to the fire fighters.

The fire interrupted telephone communications throughout the area and the fire hose, laid across surface line tracks, halted street car service on 87th street for some hours.

The loss, according to estimates made by Harvey Austrian, president of Rosenbaum Brothers, was approximately $1,750,000. The building destroyed was alone valued at $400,000.

Heavy Streams from Water Tower and Deck Pipes Are Used to Control Costly December Chicago Elevator Fire

# EIGHT LIVES LOST AT FIRE IN IMPROVISED ROOMING HOUSE

## Six Communities Fight Fire in Building Having Stores on Ground Floor and Rooms for Rent Above

A Staff Report

EIGHT are reported dead in a night fire which raged through a three-story block in Chelsea, Mass. on December 27, 1944.

The structure, which was practically wrecked by the fire, was located on a square bordered by Everett Avenue, 3rd Street and Cherry Street and was roughly triangular in shape. It was occupied on the ground floor by business firms, including a cafe and tire shop, and by roomers on the upper floors. The second floor contained five four-room apartments; the third and top floors were given over to twenty single rooms. It is said that the entire lodging space was rented, many of the roomers working nights. A number were elderly people. There was one outside fire escape leading from the top floor to the 3rd Street level.

Flames were coming from the upper floors when firemen arrived on a box alarm turned in shortly before 10:00 P. M. by August Johnson, a roomer, who discovered the fire. Three alarms were sounded in rapid succession soon after, bringing assistance from Revere, Everett and Malden. Boston and Winthrop sent additional apparatus later, as the fire progressed.

When one of the first fire companies, under command of Fire Lieutenant Charles Pierce arrived the forms of persons could be seen in windows where fire or smoke did not obscure them. Lieutenant Pierce directed the initial attempts at outside rescue while other firemen endeavored to mount the inside stairway. They found this impassible. Nevertheless, the majority of those who escaped from the second floor managed to do so by this means.

### Many Rescued by Ladder

After seven persons had been removed from a third floor window by means of ladders, a break in the smoke revealed another man at a window a short distance away. Although the Lieutenant shouted to him to hang on a moment longer, when the ladder was swung over to get then, there was a burst of flame from the window and he fell back. The firemen were unable to enter and reach him.

All of the dead lodged on the top floor. It is reported that explosions sent the flames racing up the interior to the third floor, cutting off escape of those tenants above the second floor. One of the victims was a cripple.

Wires for trackless trolleys which pass the building, handicapped the firemen in their efforts to ladder the structure. Nevertheless a number of daring rescues were made, one in particular by Hoseman Richard Callahan being reported as outstanding.

About midnight, the roof and parts of the top floor collapsed and by daylight little more than a shell was left. It was 5:00 A. M. before Fire Chief Charles G. Voke ordered his men in to search for bodies on the third floor because of the threatened collapse of the entire structure. In their search for victims, firemen had to cut through ice and rake debris in the wreckage.

Firemen had narrow escapes working on the ice-coated ladders and fire escapes. Fortunately there were no serious injuries among the fire fighters. Three persons were hospitalized, one a spectator, was cut by falling glass; the other two were occupaants who were overcome by smoke.

### Firemen Fight Rekindle

The fire was considered under control at 3:00 A. M. but continued to burn for several hours afterwards. About 8:20 the following morning, the fire rekindled, but two engine companies prevented further spread of the blaze. Firemen maintained watch lines for some time.

Owing to the fact that many of the lodgers worked at night it was some time before all could be accounted for, and the victims identified. Many of the fifteen who escaped by way of the stairs from the interior, and the ten reported rescued by means of ladders, were cared for by neighbors and were at first reported as casualties.

According to Chief Voke, the cause of the fire remains undetermined although his department, and State Fire Marshal E. H. Whittemore, are conducting an investigation to determine the origin. There is a possibilty that the cause may have been a defectve chimney inasmuch as this was reported to have caused a fire in the same building the previous week, which did $1,000 damage.

The blaze drew thousands of spectators despite the low temperature, and fire lines had to be maintained some distance away from the scene. Traffic was rerouted around the area.

Twenty Coast Guardsmen from Constitution Base were sent to the scene and aided police in handling traffic. Local emergency forces were altered and assisted the fire department to care for victims.

It was the worst fine in Chelsea since 1919 when a family of five perished. In 1908 a disastrous fire took fifty lives and burned through 492 acres, leaving 15,000 homeless.

## N.B.F.U. 25-Year Club

The nineteenth anual meeting of the Twenty-Five Year Club of the National Board of Fire Underwriters was held December 8, W. E. Mallalieu, general manager, presiding. Special honors were paid to George W. Booth and Robert C. Dennett, who are celebrating their 40th anniversaries of service with the National Board, Harry Newell, who is completing 35 years of service and A. F. Ballou, Lillie McAndrews and Hattie Matson who have been associated with the Board for 30 years.

Five new members were added to membership in recognition of 25 years of service. They are: Miss Daisy Rankin, Mrs. Eva Kottowski, T. Alfred Fleming, Joseph F. Gillece and George L. Swan. A. R. Small, president of the Underwriters' Laboratories, Inc. was elected an honorary member.

Eight Are Dead as the Result of a December Night Fire in Chelsea, Mass., Lodging House. Firemen Were Hampered by Cold and Overhead Wires

## Radio — The Coordinator

The importance of adequate radio communication in the fire service was strikingly demonstrated on the morning of December 12, 1944, near Washington, D. C., when the "Southern Flyer" and two freight trains crashed near the Highway Bridge on the Virginia side of what is known in the District of Columbia as "no man's land."

The train was the Southern Railway's crack Aiken-Augusta Special which collided with wreckage of a freight smash-up involving Baltimore & Ohio, and the Pennsylvania Railroad freight trains. The engine of the Southern rocked along for yards, dragging four cars off the track before it finally toppled over on its side at the edge of a pond, just off the right of way, killing the engineer and injuring many passengers aboard the cars. The cause of the derailment and wreck was a freight train collision involving a B & O freight and a Pennsylvania freight as both were proceeding to Potomac Yards. The B & O train rammed the other freight, throwing a car of the latter train into the path of the passenger train, tearing up the right of way and blocking traffic.

The wreck occured at approximately 7:15 A.M. during a severe snow storm and because of lack of communications at, or near the scene of the wreck, some valuable time was lost in mobilizing emergency forces.

The District of Columbia fire alarm headquarters received a call at 7:43 A.M. reporting the wreck and immediately dispatched Deputy Chief Engineer Logan Woolard of the District Fire Department with his driver in a two-way radio equipped car. Lt. V. F. Kilborne, U.S.A., Military Police Detail, Washington Military District, was detailed to accompany the Deputy Chief Engineer. At the same time, Fire Department Rescue Squad No. 1 was also ordered to the scene. This truck is also equipped with two-way radio.

Chief Woolard and Lieutenant Kilborne, upon arrival, established communications headquarters at the mobile radio unit in the Chief's car. Fire Headquarters held an open wire line to Union Station (Washington) and Military Police Headquarters, and maintained a liaison with Arlington and Alexandria, Va., police, who also had been alerted.

The Rescue Squad assisted the Military personnel, railroad workers and train crews in removing the dead and injured. As the seriousness of the emergency became known, District of Columbia Fire Department ambulances Nos. 1 and 2, Casualty Ambulance No. 1, Emergency Ambulance No. 4 and five military ambulances were dispatched to the scene of the wreck. Doctors were also sent in response to radio calls, and they rendered emergency treatment to the injured and classified those to be removed to hospitals. Buses were summoned and directed to the scene to remove passengers, who were able to travel, to the Union Station in Washington, where they were checked by railroad officials.

District of Columbia Fire Department Radio Functions Effectively in Wreck Involving Two Freight and One Passenger Train Just Outside Washington

The details of handling the communications which set in motion all this emergency response and assistance were handled by Fire Alarm Operators Vincent Marean and Joseph McInerney of the District Fire Alarm Telegraph Bureau.

This disaster might have been more serious had not adequate radio communications been promptly available to coordinate the mutual aid forces, including rescue and medical personnel and equipment. It also illustrates the importance of close cooperation and liaison between the railroads and the fire service—and of the full use of modern radio to affect such cooperation and liaison.

Smoky Two-Alarm Broadway, New York City, Blaze Threatened Seven Buildings, Caused Injuries to Several Firemen Before Being Controlled.

## Smoky New York Theatre Fire

Seven firemen, including a deputy chief, were treated for minor injuries or smoke inhalation during an early morning fire which damaged a theatre and seven stores, and threatened a large apartment house on Broadway near 88th street, New York City, December 11th.

All the injured remained at the scene. The first alarm was received at 7:50 A.M., the second at 8:21 and the fire was pronounced under control at 10:25 A.M. Actually, a three-alarm force went to work because the second alarm sounded just when company shifts were changing and both relieving and relieved firemen went to work.

More than 600 persons watched the fire, which apparently started under the Coronet Candy Studio and spread to six other small stores and the Yorktown theatre, next door to the candy shop. Firemen attempting to get at the seat of the blaze were repeatedly driven back by dense clouds of smoke and finally had to fight the fire through holes in the roof and ground floors. It is reported the smoke and water damage exceeded that caused by the fire. Among these treated by Dr. Harry M. Archer, Second Deputy Commissioner and dean of the department's medical forces, were Deputy Chief Warren Barton, 4th Division and Captain John Metz, H & L 5.

## Six Die in Baltimore Fire

Six persons died and over 50 were injured when a flash fire swept the one-story frame parish hall of St. Ambrose's (colored) Church, in Baltimore, December 6.

The blaze, which necessitated a "4-4" alarm, started from causes unkown at this writing, while an estimated 200 persons were playing card and bingo games, and spread so rapidly that some of the victims were unable to escape. It is reported that the doors of the Church opened inward and this contributed to the number of casualties.

To irate citizens who wrote Baltimore newspapers condemning inward-opening doors in places of public assembly, the editor of one newspaper replied: *"The Building Code (Baltimore) requires that the doors swing "in the direction of exit travel," but many buildings are exempted from the requirement, depending upon size and other considerations."*

Baltimore has had a number of fatal fires among its colored population since December 26th when a fire at 513 Archer street killed three. Another blaze on December 3rd at 631 Pierce street resulted in one death on December 6th and entire family of six was wiped out by an oil stove blaze at 1205 Durst street.

Following this and the fatal Church fire on the 6th, three more died from fire on December 9th at 709 W. Saratoga street.

This Frame Church in Baltimore's Colored Section Was Completely Gutted in a December Flash Fire esulting in Deaths of Six and Injuries to Many

## Detroit Firemen Battle 5-Alarm Blaze

A spectacular five alarm fire that brought 29 pieces of equipment into action early on November 2nd virtually destroyed a four story building at Detroit, Mich., and did approximately $100,000.00 damage before the fire was brought under control. The building, located on 4th Street and Porter, lower downtown west side, was occupied by A. H. Nimmo Dynamo Company (the owner) on the first floor; the Juvenile Chair Mfg. Company on the second floor; the Detroit Overall Company, which were engaged in manufacturing Army overalls, on the third; and the Victory Bar & Mfg. Company on the fourth floor.

Flames were visible for miles, and thick smoke blanketed the lower downtown west side when first alarm companies responded. A Detroit Police Vice Squad Car, cruising in the district discovered the fire and turned in the first alarm from box 86, located at Michigan and Second at 2:28 A.M. This brought out Engines 8—1—3, Ladder 1—3, Chief 1, High Pressure 3, and Rescue Co. 1. The fire was extended throughout the entire building as first alarm apparatus pulled up so a 2—2 was sent out at 2:35, bringing in additional equipment. Engines 6—4—5, Ladder 12, Batt. Chief 2, Rescue 2, High Pressure 1, Water Tower 1, the Ambulance, Light Rig, Gasoline Supply Truck, Chief of Water Supply, Chief of Apparatus, and the Fire Marshal.

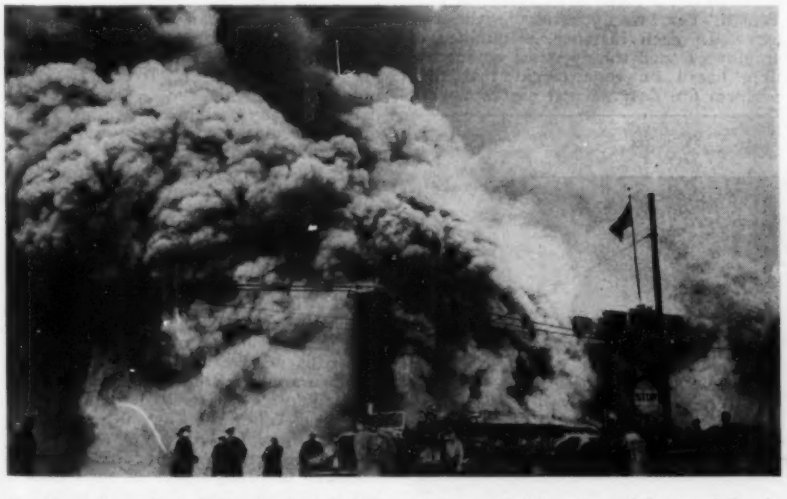
Third Alarm was sounded at 2:40 A. M. calling Engine 11—10, Ladder 20, and Chief of Department. Fourth Alarm at 2:47 A.M. brought out Engine 19—15, Ladder 5, and Batt. Chief 3. Fifth Alarm at 2:52 A.M. Engine 17—18 responded. Ladder 14 as well as Engines 53—43—40 were sent to the fire by telephone at 3:11 A.M. Engine 42—37—35—46 were moved, filling in at houses vacated by apparatus already in service at the blaze.

Six High Pressure guns were brought into play on the burning building as well as four aerial ladder lines.. Twenty-one—2½ inch lines were also used.

Forty thousand dollars worth of electric motors were damaged, according to F. A. Nimmo, President of Nimmo Electric Co.; 45,000 yards of overall material valued at $20,000 were consumed by the flames. The machines used in making the Army and Navy Coveralls were also destroyed.

No one was injured although the night watchman, William Cody, 70, narrowly averted being trapped by the flames, when he was rescued by Patrolman Milton Wagner and Arthur Lindow of the Detroit Police Department. The cause has not been determined, but is under investigation by the Detroit Fire Department's Arson Squad.

MAX O. LEE.



Fast Spreading, Smoky December Fire in Detroit Industrial Building Caused Reported Deaths of at Least Three, and Heavy Property Loss

## Rourke Confirmed as Detroit Chief

The appointment of John L. Rourke as Chief of the Detroit, Mich., Fire Department has been confirmed by the Fire Commission. He takes the place of John A. Keefe, who retired last October.

Chief Rourke joined the Detroit Fire Department in 1910. He was appointed Lieutenant in 1921, Captain in 1926 and was made Battalion Chief in 1928.

Chief Rourke is active in the state and nation's fire service. He is a member of the International Association of Fire Chiefs.

The Commissioners also confirmed the appointment of Ninnian C. Higby as Assistant Chief. He joined the department in 1913, was made a Lieutenant in 1924, a Captain in 1928 and a Battalion Chief in 1939.

## Emergency Truck for Bernardsville, N. J.

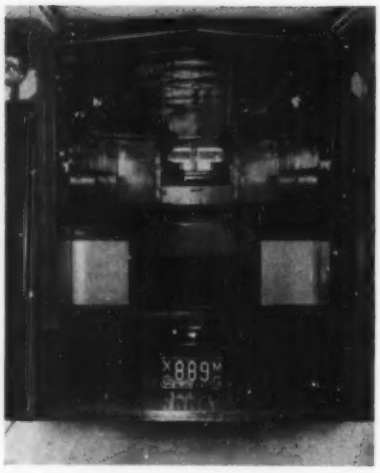
The apparatus of the Bernardsville, N. J., Fire Company has been augmented with a very modern and well equipped emergency truck.

An ambulance corps was first proposed as early as 1907, but there was not considered enough demand for it at that time and the subject was dropped. Some years later life saving and rescue work was advised and the company started in, drilling with a lung motor, the property of a local pharmacy, but it was not until after a serious fire in February, 1927 that much progress was made. This fire resulted in a more thorough investigation of this work and the first real first aid equipment was secured, subsequently followed by the purchase of an inhalator, army stretcher, blankets, life belts and additional all-service gas masks, this equipment then being carried on the company's chemical truck.

After the purchase of the Cadillac which formed the basis for the new emergency truck the above equipment was transferred to it and an oxygen mask, portable flood-lighting set and more first aid equipment was added.

The new truck is an anclosed unit and serves as an ambulance as well. Four stretcher cases can be carried; there are also seats for three, not including three on the driver's seat. With stretchers folded, the total seating capacity is sixteen.

Equipment for the most part housed in compartments includes a 2,500 watt portable flood lighting set with 500 feet of cable battery lamps, flashlights, red lights and flags; six all-service and one oxygen masks; cutting torch; four axes; hand, crosscut and hack saws; three claw tools; bars, sledge hammer, hatchet, chisels, wrenches, auger, pliers and other miscellaneous tools; pick, hammer-head pick, four shovels (one long-handled, two short-handled and one snow, four brooms, two squeegees, three pikes (one long, two short), ceiling hook and cutter, jacks, blocks, etc.; two 50-lb. carbon dioxide extinguishers; two 5-gallon pump tanks; 10-ft. folding and 30-ft. rope ladders; 400 feet of rope, pulley blocks, life and lineman's belts, grappling and bale hooks; eight salvage covers, 12 feet by 18 feet; hose hoist, hose bridges, towing cable; hose and hydrant wrenches; hose and ladder straps, hose adapters, helmets, coats, boots, gloves and white coveralls; inhalator, chemical heat pads, Foille spray kit; four army and one canvas stretchers; wool, rubber and asbestos blankets; traction and board splints; fracture board; asbestos and rubber gloves and a quantity of first aid supplies, including two portable kits.



Interior View of Emergency Truck Showing Arrangement of Stretchers

The first aid and rescue or emergency squad is a part of the Bernardsville Fire Company and other members work with this unit when occasion requires. The squad officers consist of a captain and two lieutenants, all three being special police. Nineteen men hold Red Cross first aid cards and thirteen others have also had this training.

Edwin S. Spinning is President of the company which was organized in 1897.

## Holds Pay Due for Fire Duty

In a December decision, the Supreme Court held that the time during which employees are required to remain on an employer's premises so as to be on call to fight fires constitutes employment for which they must be paid under the Fair Labor Standards Act.

An Armour & Co. soap factory in Chicago and a Swift & Co. plant in Fort Worth, Tex. were parties in the two cases. In each instance, a number of employees sued for overtime compensation, based on requirement that they perform fire duty several nights a week in addition to their regular daytime work.

In the Armour case, the lower courts ruled that fire duty is an occupation necessary to production of goods for interstate commerce and that employees were entitled to pay for all time they were "on call," except time spent in sleeping and eating meals. Armour appealed these findings. In the Swift case the lower courts held that time spent in the fire hall by the employees was not "hours worked" within the meaning of the Act. The employees in this case were paid 64 cents for each alarm answered. They appealed to the Supreme Court.

In the Armour case Justice Jackson, who read the unanimous decision, wrote that "we think the labor standards act does not exclude as working time periods contracted for and spent on duty in the circumstances disclosed here, merely because the nature of the duty left time hanging heavy on the employees' hands and because the employer and employee cooperated in trying to make the confinement and idleness incident to it more tolerable."

## I. A. F. C. Directors to Meet

The Annual Meeting of the Board of Directors of the International Association of Fire Chiefs will be held at the Hotel Pennsylvania, New York City, on January 29-February 2.

Plans will be discussed for the 1945 Conference of the Association, and the program laid out for that meeting. Many other problems will be given attention, including post-war plans for the Association.

## Predicts Planes Will Be Used in Fighting Rural Area Fires

At the meeting of the New Hampshire Fire Chiefs in Concord, December 11th. George A. Robinson, designer and architect of municipal buildings, discussing post-war planning, predicted that future fire stations in the rural communities may be equipped with airplanes to fight forest and woods fires. He also recommended that fire stations to be erected in small towns be designed to take care of a ladder truck, pumper and hose truck as a minimum requirement.

Mr. Robinson had a special message for the wives of fire chiefs. He urged them to take more interest in fire fighting and equipment. In rural communities women have become a vital part of many volunteer fire organizations, he said.

A question and answer period was conduced by A. Clifford Hudson, Secretary of the Association.

The next meeting was set for the second Sunday in February at Manchester, the speaker to be Mr. A. C. Hutson, of the National Board of Fire Underwriters. A committee composed of Chief William E. Ely, Pittsfield; Eugene Riley, Keene; and B. O. Berquist of Berlin, was named to study the status of auxiliary firemen, from the standpoint of insurance inasmuch as the State Council of Defense has gone out of existence. While the Council was operating, auxiliary firemen were covered by federal insurance in case of accidents occurred in performance of their duties, but it is understood that with cessation of defense activities, insurance coverage of auxiliary firemen also ceased.

Side View of Truck Showing Placement of Emergency Equipment

## FIRE ESCAPE HOOK

A fire-escape hook can be used advantageously to get a line up a light well; or ventilation shaft.

* * *

## RECORDING TIME OF RESPONSE

Many different methods of recording the time of response to, and return from alarms by fire companies have been devised. In due time, "Short Cuts and Gadgets" hopes to describe most of them. Meanwhile, here's the idea developed by the Cicero, Ill., Fire Department as contributed by Captain Wm. Zahrobsky, Eng. Co. No. 3:

"All companies of the Cicero Fire Dept. are required to record the time of response to the fire alarm as well as the time of return. Since department headquarters is the only engine house equipped with a box alarm system that automatically records the time of all alarms, outlying houses experience difficulty maintaining accurate time records. At the quarters of Engine Company 3 the problem was solved in this simple manner at a minimum of cost.

"An old electric clock was rescued from the scrap heap. Members repaired and oiled the mechanism. It was then installed on the wall *near the rear of the apparatus.* The wire leading from the clock to the wall outlet was cut and a switch inserted about 12 inches from the clock itself. When an alarm is sounded, the pipeman riding that part of the apparatus nearest the switch, simply closes the switch, thus breaking the circuit and stopping the clock. Upon returning, it is simply a matter of noting the time and resetting the clock. The time of return, of course, is recorded from the regular company clock in front of the engine house or any other available time piece.

"The method outlined above eliminates the flood of phone calls to headquarters for the correct time of alarms. I also believe this gadget will prove beneficial to small towns and volunteer departments that find expenditures limited."

Thanks, Captain Zahrobsky for this "short cut" and for the kind things you say about this new editorial feature.

# SHORT CUTS AND GADGETS

## CUTTING A TAR ROOF

When cutting up a roof that has been tarred over a hot fire, it is often found that the soft tar will adhere to an axe blade, making cutting difficult.

If a few drops of lubricating oil are placed on the blade of the axe, it will be found that it is easier to cut and the tar will not stick to the blade.

Note: You will find a squirt can of lubricating oil on most pumpers.

Lieut. W. J. C., New York

* * *

## "SHORT CUT," INDEED

Here's an idea which was advanced by Chief Howard Travers of Baltimore at an Eastern Division (I.A.F.C.) Association convention. It had to do with response to alarms of fire. Said Chief Travers: "In Baltimore we take care of our rural sections by mapping the areas. We run a card index system for every fire alarm box. On the back of every one of these cards there is a map showing the proper route to each of those boxes. So, in case the nearest companies are out to a fire, the next nearest companies pick up the card and all they have to do is look on the back of the card before they start, and that gives them a diagram showing the shortest and best way to reach the box location."

The editor of "Short Cuts" has also received the suggestion that all fire houses should display a map or maps of their battalion district (or area covered by the respective companies). Preferably this should be at or near the watch desk and should include the streets and highways, the location and number of fire alarm signal boxes and, if possible, the fire hydrants.

## WHEN BOX IS OUT OF ORDER

New York City has in the past used a special card printed in red ink, reading: "THIS BOX IS OUT OF SERVICE" to identify fire alarm boxes that are out of commission, and at the same time instruct a person desiring to turn in an alarm what to do in the emergency.

These cards served effectively at the time of the hurricane last September when many fire alarm circuits and boxes were out of service. Unfortunately many cards, which were hung on the handles of the boxes, somewhat like the "Do Not Disturb" hotel placards, disappeared in one way or another after the storm.

The City has now prepared a revised form of card, printed in black ink instead of red, which heads:

THIS BOX IS OUT OF SERVICE
In Case of Fire
Dial Telephone Operator and Say:
"I want to Report a Fire"
Nearest Fire Company is at:

_____

New York Fire Dept.

The location of the nearest fire company is inserted in the blank space.

* * *

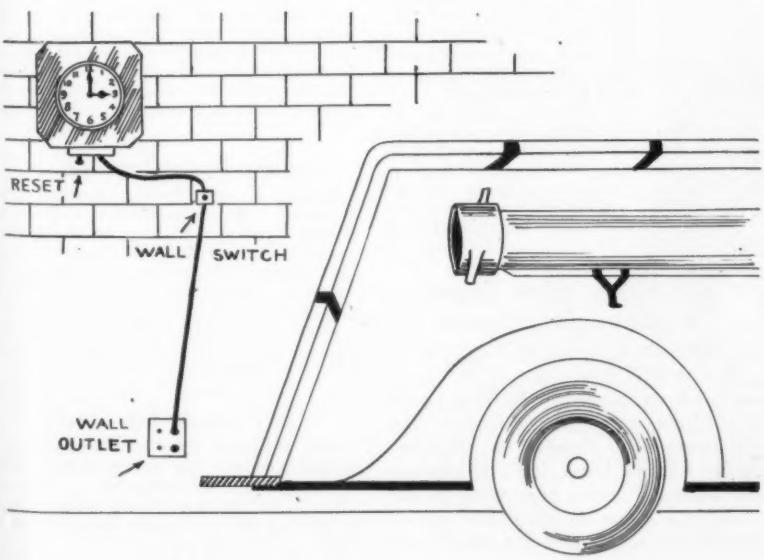
## MORE ABOUT "HOLDER-OPENERS"

Previously published "short cuts" for holding open windows, doors, etc. have elicted considerable response to the editor of this feature. Here's a letter from Henry T. Hanson, Maywood, Mass., who contributes an idea for "short-cutting the short-cuts." He writes:

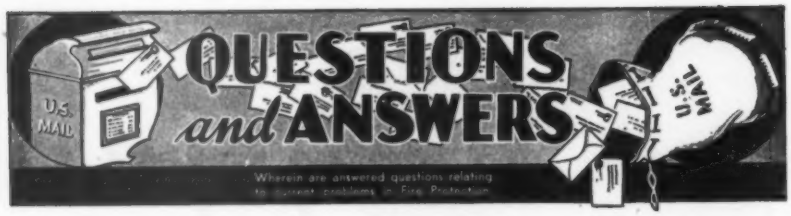
"In reading your "Short Cuts" column in the December issue I became interested in an article concerning the use of double pointed pins for holding windows open (submitted by H. P. J., Norfolk, Va.)

"I have used this device in the past and considered it the best solution to an annoying problem. I might add, however, that we use ordinary four inch spikes, which are inexpensive, readily obtainable, and easily cut and filed. They should have the head ends cut back so that the remaining straight pins will just fit into an old Prince Albert tobacco tin. The tin should be stuffed with excelsior to prevent rattling and the pins being easily spilled out. To be successful, these pins must be real sharp and are therefore dangerous to carry in the pockets unless well protected. I would hardly trust the scheme of using corks for protecting the sharp points."

We'll hear more from "H. T. H." with other gadgets and short cuts."




←Illustration shows simple method for recording the time of response of fire apparatus used by Cicero, Ill.




## Vertical Reach of Streams

*To the Editor*:

I recently took a promotional examination. One of the false and true questions was as follows:

"A 1½-inch nozzle has approximately 10 per cent greater vertical range than a 1-inch nozzle when both are supplied at the same nozzle pressure."

How would you have answered the above question:

*Answer:* The figures below on the vertical reach of fire streams are taken from a publication of the National Board of Fire Underwriters, and are based upon extensive tests conducted by John R. Freeman some years ago.

**Effective Reach of Streams**
(Vertical in Feet)

| Pressure at Nozzle lbs. sq. in. | 1-in. nozzle | 1½-in. noz. | Add. Range of 1½ Stream Over 1-in. (ft.) | % Add. Range of 1½ Over 1-in. Stream |
|---|---|---|---|---|
| 30 | 51 | 54 | 4 | 7.85 |
| 40 | 64 | 69 | 5 | 7.8 |
| 50 | 73 | 79 | 6 | 8.2 |
| 60 | 79 | 87 | 8 | 10.1 |
| 70 | 85 | 92 | 7 | 8.25 |
| 80 | 89 | 96 | 7 | 7.9 |
| 90 | 92 | 100 | 8 | 8.7 |
| | | | Av. 6.44 | Av. 8.4% |

The figures given for vertical reach are for effective fire streams.

If you will check through these figures, you will find that the average excess in range of 1½-inch stream over a 1-inch stream is approximately 6½ feet.

For the seven nozzle pressures given, the increase in range of the 1½-inch nozzle over the 1-inch nozzle (average for the seven) is 8.4 per cent. This may be assumed to be approximately 10 per cent as required in the question.

Therefore it is our belief that the question should be answered "true."

## The First Fire Boat

*To the Editor*:

Can you tell me where and when the first fire boat was used?

N. M.

*Answer:* Although there may have been an earlier attempt to create and use a fire boat, the first authentic record of such a fire fighting unit is contained in "The History of the New York Fire Department," by Lowell Limpus (E. P. Dutton & Co., 1940). This states:

"As New York expanded the Department kept pace, and in 1800 the first fire boat was launched. It was known as the 'Floating Engine' and consisted of a very large and powerful hand-operated pump mounted on a big scow which was built with a shrap bow and square stern. The vessel contained hose, hooks and pipes and was manned by twelve oarsmen who responded to alarms along with members of the engine company proper.

"It was anchored at the foot of Roosevelt Street and was used to combat fire occurring on vessels, wharves or waterfront property. The Floating Engine was to become the ancestor of a great fleet of powerful fireboats in later years."

## Extinguisher—or Hazard?

*To the Editor:*

As a subscriber to FIRE ENGINEERING I would like the following answered: Methyl Bromide is stated as being a refrigerant with a fire hazard in National Board of Fire Underwriters Bulletin No. 12. The Fire Chiefs' Hand Book states that it is used as an extinguisher."

Sr. Capt. C. H. S.

*Answer*: Methyl Bromide is used both as a refrigerant and as fire extinguishing agent.

We have checked this matter with the National Board of Fire Underwriters and they tell us that while it is explosive within very narrow limits, this range of explosibility is so rarely reached that it is felt safe to use it as a fire extinguishing agent. As such an extinguisher it is very effective.

Reference to British handbooks on Methyl Bromide as a fire extinguishing agent shows that the explosibility of Methyl Bromide is completely overlooked as no mention is made whatsoever of this characteristic of the gas.

Apparently it is more theoretical than real.

## Ventilating When Storm Windows Are Present

*To the Editor*:

I would like to ask a question in regard to ventilating a dwelling house fire. Upon arrival at the fire we find the house fully charged with smoke; in fact, smoke is coming out between the siding. Firemen are unable to get inside the house to reach the seat of the fire on account of hot smoke and gases. This is a two story house with the storm windows on. These cannot be opened up from outside at the upper floors to ventilate. Would it be advisable to break the glass in both windows to clear the house of smoke and hot gases, to permit the firemen to enter with their properly charged line to get at the fire? It would appear to be the damage to the windows would be less than to the inside of the house if the firemen are thus able to quickly get inside.

*Answer*: It is true that glass is ordinarily a cheap part of the construction of any dwelling especially as compared with lath, plaster walls, timbers, etc., and if the destruction of $25 worth of glass will enable firemen to advance lines and control a fire which otherwise would possibly result in much greater losses, it is good practice to break the window, or windows.

However, it is advisable to first attempt to pry or lift out the storm window. Usually this is fastened with temporary, light fasteners which will give way when axe or claw tool is used to pry out the sash. This entails no more work than to break the class; in most cases it is usually necessary to operate from a ladder. If the sash is secured by screws or otherwise firmly locked in place then the glass may have to be broken. In this event, however, it may not be necessary to break the inside window, if it can be forced open in the usual manner, and the lower part raised (if entry is desired) or the upper part lowered if only ventilation is wanted. If the storm glass is broken it should be well cleaned out of the sash.

Where the storm window is in panes, it may be sufficient to break out only the upper section.

It is well to add a note of warning in this connection. Breaking out windows will not always ventilate a "house"; frequently they open into a bathroom, or closet which may in turn have the door closed and thus nullify the effectiveness of opening the windows. Care should be exercised to open windows which are so located as to offer greatest possibilities of overall ventilation. Good practice suggests that efforts be made to ve..t by removing attic louvres, or through the roof at the gable, or over a stairways. If horizontal ventilation will be more effective, the leeward openings should be made first.

## An Audel Treatise

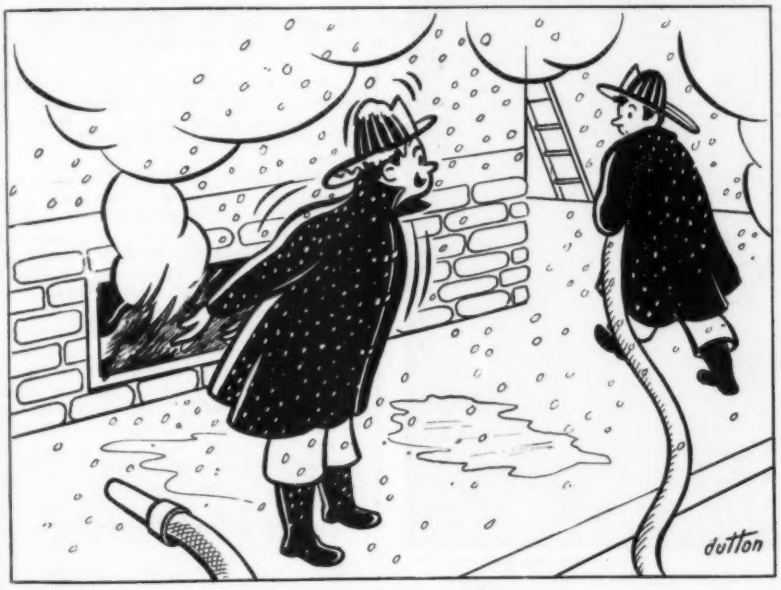
AUDELS PUMPS, HYDRAULICS, AIR COMPRESSORS: A comprehensive treatise on pumps, hydraulic and air problems, with ready reference index. 1658 pages, including numerous illustrations by Frank D. Graham. Published by Theo. Audel & Co., New York, N. Y. Price $4.00.

Orders for this publication may be placed with the Book Department of FIRE ENGINEERING.

## Boy Scouts Take Tests

The National Board of Fire Underwriters reports that in connection with the last Fire Prevention Week program a total of 9,630 Boy Scouts took the test on firemanship for merit badges. This is understood to be a record.

# FALSE ALARMS




"I Just Hate to Put It Out!"

### Time Marches On

Once more the tramp of marching feet,
Once more the sound of shot and shell;
Once more a sign as we start to eat:
"Use Just One Lump and Stir Likell."
Victor Blake, in the N. Y. Sun

---

Secretary: "Sorry I am late, Mr. Smithers. I'll be here bright and early tomorrow morning."

Boss: "Don't promise the impossible—just be here early."

---

### Discovery

The school boy was wrestling with examination questions. Finally he came to: "State the amount of oil exported from the United States in any one year."

With sudden inspiration, he wrote: "In 1492—none."

---

Drunk (to naval officer): "Shay, call me a cab, will ya?"

Officer: "My good man, I am not a doorman. I am a naval officer."

Drunk: "Awright, then call me a boat. I gotta get home."

---

"What kind of a dress did Betty wear to the party last night?"

"I don't remember; I think it was checked."

"Boy, what a party!"

---

*Little Miss Muffet decided to rough it*
*In a cabin both old and medieval:*
*A soldier espied her,*
*And plied her with cider,*
*And now she's the forest's prime evil.*
*—Yank.*

"You like bathing beauties, don't you, Bill?"

"Don't know, never bathed one yet."

### A Natural Question

Guest (to host in new home): "Hello, old pal, how do you find it here?"

Host: "Walk right upstairs, and then two doors to the left."

---

Salesman: "I represent the Mountain Woolen Mills, lady. Would you be interested in some coarse yarns?"

Gran'ma: "I shore would, stranger. Set down and tell me a couple."

---

### Missed the Sign

"Do you know what the ram said after he fell over the cliff?"

"No, what?"

"I didn't see the ewe turn."

---

According to latest reports, there are more women under arms in Russia than in any other country in the world—except the United States on Saturday night.

---

Blessings on thee, pretty miss;
Quaker maid I long to kiss.
With thy merry wanton quips,
And thy quirking lipstick lips.
All that sort of thing connotes
That thee knows thy Quaker Oats.

---

Headline in *New York Times*: "Father of Ten Shot. Mistaken for Rabbit."

Ewing Galloway Photo

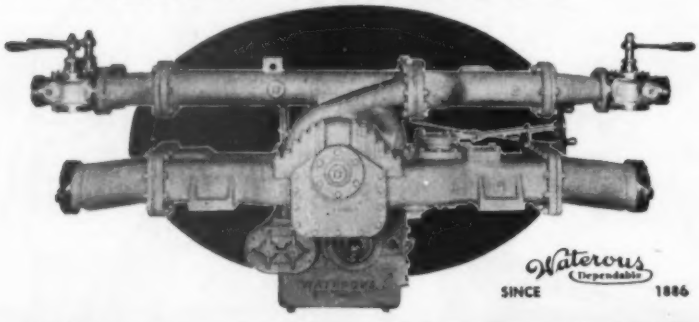
When the alarm hits—it's speed you want—your pumper must be ready! With 59 years of experience back of it—you can depend on a WATEROUS FIRE PUMP when seconds count!

WATEROUS Pumps are available to you on many leading makes of fire apparatus. Next time you select a pumper—be sure the pump is a WATEROUS.

**Literature on Request**

**WATEROUS COMPANY · ST. PAUL, MINNESOTA**

*Also Manufacturers of WATEROUS Fire Hydrants*




**WATEROUS FIRE PUMPS**


## The Post-War Fireman

(*Continued from page 27*)

or have been transported by planes. Flying will become a very common mode of travel. With the growing use of air transportation both by established air lines and private owners, the fire hazards from this source will materially increase. When it is recalled that some of the larger planes are virtually flying tank wagons, carrying in some instances as much as 7,500 gallons of gasoline, the seriousness of this hazard may be appreciated.

Hundreds of fires have already occurred from crack-ups, and some have been serious. Seattle, Wash., lost a packing plant which was fired by a crashing plane and completely destroyed. At Chicago a large gas tank was destroyed by fire caused by a crashing plane.

The problem incidental to plane crash fires are many, and what the Army and Navy have learned in the control of such fires during the war will be of material benefit to municipal fire fighters after the war. Much still remains to be done in developing the technique of handling crash fires, and herein the post-war fireman will have a task of considerable magnitude.

### Fire Extinguishing Agents

Partly as a result of the work done by our armed forces, and partly due to specialized research, several new ideas may be encountered in post-war years in the line of fire extinguishing agents.

In the first place, fog will be more generally employed, and some of its present unknown qualities will be better understood after the war.

The controversy between high and low pressure fog should be solved by that time.

A new development which offers considerable possibility for extinguishing certain types of fire is a surface tension reducer used in the water from which fog is produced. This surface tension reducer (which is also known as a wetting agent for the water) enables the water to be finely divided with pressures lower than those used today. Such a finer fog may be particularly effective on special risks, such as certain volatile inflammable, liquids.

Methyl bromide, largely due to its application in controlling airplane fires, may find wider use after the war. While vapors from this chemical were formerly considered inflammable, or explosive, its explosive range is very limited, and apparently is rarely if ever reached.

Methyl bromide has been used almost entrely on war planes of British manufacture as a fire extinguishing agent, and now is finding its way into some American planes.

Carbon dioxide, as a result of specially designed apparatus for use on crash and other fires. may find wider use after the war. It has proven to be very effective in handling volatile fires, fires in live electrical apparatus, and other special applications.

Dry powder, discharged from the extinguisher by the pressure from an inert gas, may also find increased use.

These, as well as additional extinguishing agents, may be expected to find growing usage in municipal fire department work following the war.

# S-O-S Fire Guard

HEAVY DUTY

## vaporizing liquid chokes flame

**S-O-S Fire Guard dispatches fire with a potent dose of vaporizing liquid. It is America's great utility fire extinguisher because of its handy size and overall effectiveness. S-O-S Fire Guard vaporizing liquid forms a heavy fire-smothering gas, quickly stifles flame, guards against post-ignition hazards. S-O-S Fire Guard resists freezing to a point approximately 48° below zero. Patented Safety Phlare design assures new pump action at all times.**

### WHERE to use S-O-S Fire Guard

Especially designed for electrical, chemical, gasoline, and paint fires. Ideal for car, truck, plane, boat, home, and factory use.

### HOW to use S-O-S Fire Guard

Turn handle either way to release safety lock. Aim extinguisher and use pumping action. Direct the stream around the outer edge or side of fire to smother flame.

**SAFETY PHLARE**

FREE Above S-O-S Fire Guard poster colorful for wall display. Write Detroit office.

IF IT'S GENERAL IT'S DEPENDABLE

**THE GENERAL DETROIT CORP.**

2270 E. JEFFERSON AVE., DETROIT 7, MICH.

*Distributors in principal cities*

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# PYRENE FOAM + ONE MAN

## Killing Oil and Gasoline Fires

*is as simple as squirting a Hose*

**Automatic, mechanical mixing of Pyrene Foam Compound, air and water is so perfectly engineered in the Pyrene PlayPipe that fire fighting with Pyrene Foam is as simple as using a fire hose. Positive extinguishment is certain because oxygen is cut off and flames smothered by Pyrene Foam in seconds.**

**With the new Pyrene method, no time is lost in complicated preliminaries. One man does it! . . . Here's all there is to it: Turn on water from hydrant or standpipe—(salt water is just as effective). Pick up the PlayPipe; put on KnapSack or HipPack containing Pyrene Foam Compound; move to the fire; drop pick-up tube in the compound container and play foam on the fire. 400 to 1200 gallons of foam a minute are laid down solidly on the fire. It's out at once and for keeps.**

**Pyrene Foam and PlayPipe are as effective on outdoor as on indoor fires; and on solid embers as on volatile liquids, because after a fire in gasoline, oil or flammable liquids has been smothered in seconds with Pyrene Foam, by merely lifting the pick-up tube out of the container a water stream instantly replaces the foam, thus smoldering embers of adjacent fires are effectively handled.**

**Pyrene PlayPipe and Foam Compound are listed by Underwriters' Laboratories and approved by Factory Mutuals.**

**Pyrene offers industry a complete line of fire extinguishers, for every hazard. Demonstrations and estimates without obligation.**

***By the way:* When did you last test the fire extinguishers in your home?**

Pyrene
TRADE MARK
Reg. U. S. Pat. Off.

**Pyrene Manufacturing Company**

*Founded 1907*

NEWARK 8, NEW JERSEY

AFFILIATED WITH THE C-O-TWO FIRE EQUIPMENT CO.


As specialized hazards require special extinguishers, the post-war fireman will have to be posted on these special extinguishing agents and their specific applications. Here again his knowledge must be broadened.

### Fire Apparatus

Changes made in fire apparatus in post-war years will probably not be of such nature as to require special training of the fireman. Crash trucks may come into common use at airports but the basic members of such unit are similar to the ones found in other municipal fire apparatus.

Power-operated metal aerials are likely to be used on an increasing scale, and while more intricate than wooden aerials, they will be much easier to operate, and require less personnel. Here mechanical ability will be an asset on the part of a fireman.

### Radio

Two-way radio, "walkie-talkies" and induction radio all appear as post-war certainties.

The walkie-talkie is of particular value on the fire grounds, enabling an officer to keep in contact with his men and to receive reports on the progress of fire fighting operations in any part of a building involved. It also enables the officer in command to more quickly and effectively deploy the companies as they arrive.

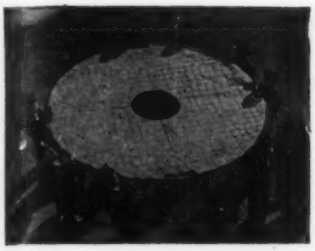
Two-way radio, on an ever-increasing scale of use, will serve as it is today serving in fire departments which have been able to secure their own wave bands.

The induction radio, a comparatively new development that is today being used only by our military forces, will be of particular value in small towns and rural communities. This type of radio does not at the present time require permission of the FCC for its use. It employs a spectrum beyond the range of channels commonly used for radio communications. It functions however, in a manner difierent from that of the two-way radio now used in the fire service. The radio waves generated by its transmitter induce current in any nearby conductor, and the signal can be picked off the conductor at a point miles away. Telephone, telegraph or power wires will carry the signal, and there is no danger whatsoever to the operator for no mechanical connection is made to the conductor. This type of radio will prove effective in alerting firemen at home.

The post-war fireman will have to be familiar with the functioning of radio, in its various forms and with its application and use.

### Mutual Aid

Mutual aid among neighboring fire departments has proven highly effective where the system is well organized. The ability of a fire department officer to summon help from his neighbors in a manner similar to the calling of additional companies to a large fire in a city promises a most effective way of handling large fires in the smaller communities in the future. The growing use of mutual aid will make it essential that tomorrow's fireman think in terms of



# IT'S NO JOKE

on the chief's old flame, or anyone else caught on an upper floor, if there isn't a dependable life net available instantly.

If you now have life nets, and every properly equipped fire department should, check them — or, better still, let us check them over for you (no obligation) for any defects that might affect their dependability.

**WOULD YOU LIKE A COPY OF THIS CARTOON FOR YOUR BULLETIN BOARD OR A BUDDY? JUST DROP US A CARD.**

Specify ATLAS on new apparatus

# ATLAS SAFETY EQUIPMENT CO., Inc.

26 WARREN STREET ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ NEW YORK 7, N. Y.

# SAFER BECAUSE OF BALANCED WEAVING

*Circular creel feeds cords to one of Eureka's Multiple-Weaving Looms. This specially designed loom gives to the jackets of Eureka Fire Hose the perfect* balance *essential to uniform high quality.*

In fire hose, *balanced weaving* is a factor of prime importance. It eliminates excessive writhing, twisting and elongation when hose is subjected to pressure at the scene of action.

Eureka's *BALANCED WEAVE* results in a stronger . . . safer . . . and more trustworthy hose for use under the most hazardous conditions.

*"For greater protection to life and property"*

**EUREKA FIRE HOSE**

*Division of* **United States Rubber Company**

EUREKA

**1230 SIXTH AVENUE · ROCKEFELLER CENTER · NEW YORK 20, N. Y.**


defense areas rather than his own community and his own department. He will be required to know facts about fire protection in the neighboring communities which formerly were of no concern to him. He will have to know something about neighboring water supplies, fire fighting apparatus, and geographical features which have a bearing on fire fighting. His viewpoint will of necessity be broadened.

Two additional factors will have a very marked effect on the status of firemen in post-war years. The first is the return of men from the armed forces who have had training in fire fighting; the second is the training given auxiliaries by the Office of Civilian Defense and its affiliated groups.

Men who have served as fire fighters in the Army, Navy and Coast Guard will return to their communities with sound, basic, knowledge of fire fighting operations. They will know apparatus and equipment. They will know the elements of fire control. They will have a new conception of discipline.

Those who return *to the fire service* will return with many ideas applicable to municipal fire fighting.

Those who return *to civilian jobs will* be of great value to industry and business. Their fire-consciousness will result in a marked reduction of fire hazards in industry in general.

The work of the Office of Civilian Defense with its millions of enrollees all over the country including hundreds of thousands of auxiliary firemen will produce a very beneficial effect in the public's attitude towards the fire service. An auxiliary who has taken training in a fire station under a professional fireman will have a higher regard of the efficiency and ability of these men. The hours spent in study and in drill have given the auxiliaries fire protection information which they will carry back to their homes and places of business.

The fireman of the post-war years will thus find a much more cooperative and appreciative public than he found before Pearl Harbor.

The post-war fireman will have much to learn to qualify himself for the years ahead. He will be a much better qualified individual than the fireman of the past decade. He will have a fairly good knowledge of chemistry, of hydraulics, of building construction, of industrial processing, of hazardous materials, and of fire apparatus and equipment and their use, to say nothing of laws and ordinances and rules and regulations covering his local department.

As the caliber of the post-war fireman increases, his reward in compensation, privileges, and public esteem will grow in proportion.

## Connecticut Firemen's Training

A. M. McCullough, Director of Public Training, Department of Education, Connecticut, reports that the state's training program for 1944 was a full one. There were 106 enrolled at the State Fire College; 307 from 21 different fire departments of the state took firemen's training, and in the special Drillmasters' Teacher-Training Course there were 13 enrolled.

Training activities were under the direction of Chief John S. Pachl.

# Wartime Life Guards

## WITH A PEACEFUL FUTURE

**SCOTT *Air-Pak* EQUIPMENT**

★ **Here, in principle, is the forerunner of safety equipment which in the near future will dependably serve many industries. Scott *Air-Pak* (Portable Oxygen) outfits are today serving our fighters at extreme altitudes—where oxygen failure means death in a matter of minutes. These fighting men's lives depend upon the oxygen Scott equipment feeds them.**

**Soon industry will benefit from experience gained by Scott engineers in designing and building such life-guarding apparatus. Yes, soon portable breathing equipment—embodying Scott reliability—will be available for peace-time protection wherever the need for *complete* respiratory protection is imperative.**

**Scott**

**AVIATION CORPORATION**

**Established 1932**

**215 ERIE STREET, LANCASTER, N. Y., U. S. A.**

## FOR TOMORROW'S SAFETY

Deadly coal gas will hold no terrors for the miner protected by the Scott Air-Pak.

Fireman protected by Scott Air-Pak will work fast, efficiently despite smoke and fumes.

Maintenance of gas storage tanks will be easier and more economical with workmen protected by the Scott Air-Pak.

LET

"The Breath of Life"

RIDE WITH YOUR APPARATUS!

The H·H INHALATOR

FOR SAFE, GENTLE, NATURAL RESUSCITATION OF VICTIMS OVERCOME BY GAS, SMOKE, DROWNING, OR OTHER RESPIRATORY CAUSES

AMERICAN MEDICAL ASSOCIATION ACCEPTED COUNCIL ON PHYSICAL THERAPY

When you respond to every alarm with the H·H Inhalator at hand for instant use, you're equipped to meet respiratory emergencies with speed and safety. Developed by medical science to meet the need for safe resuscitation of victims of respiratory distress, and used in conjunction with the Schaeffer prone pressure method of artificial respiration, this famous instrument supplies oxygen-carbon dioxide mixture according to the patient's lung demand—without pressure—without suction—assisting recovery by effective, natural means.

***Write for descriptive Bulletin No. CA-9.***

MINE SAFETY APPLIANCES COMPANY

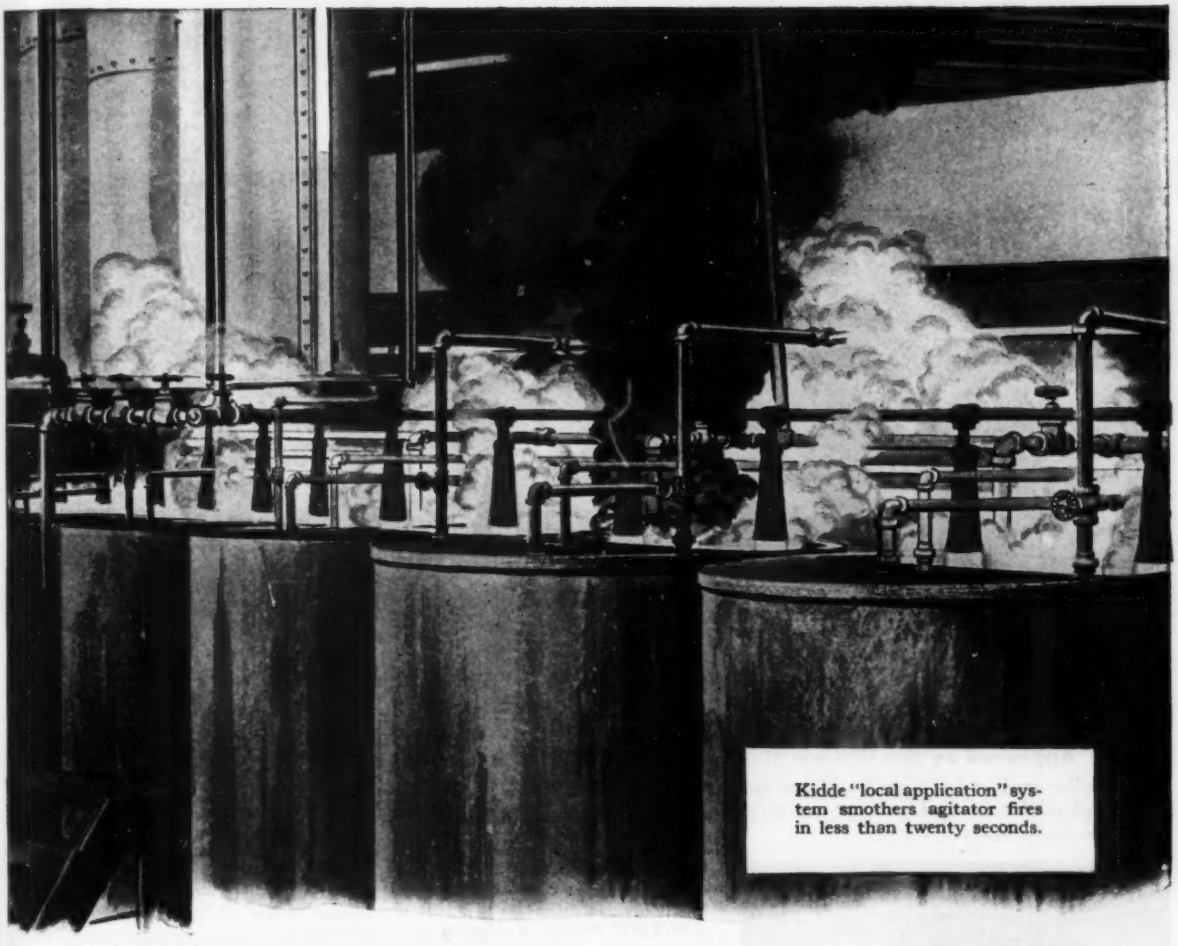
BRADDOCK, THOMAS AND MEADE STREETS, PITTSBURGH 8, PA.

*District Representatives in Principal Cities*

## What's Burning

THE following list includes fires of $50,000 and over in the United States and Canada, for the month of December, 1944. These figures, compiled from the telegraphic reports, are based on estimates made at the time and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

| Month Ending December 31 | Losses in Thousands of Dollars |
|---|---|
| **Chicago, Ill.**—Garage and ten trucks of Bee-Mac Transport Company, destroyed | 50 |
| **Magnolia, Ark.**—Masonic bldg. destroyed | 60 |
| **Los Angeles, Cal.**—Bldg. owned by Fern Harding, occupied by Milo Harding Co., mfrs. of duplicator supplies, damaged | 60 |
| **North Oxford, Mass.**—Plant of Ivanhoe Blanket Co. destroyed | 50 |
| **Detroit, Mich.**—Cunningham Drug store, Peggy Ann and Red Robin women's apparel shops destroyed | 80 |
| **Philadelphia, Pa.**—Automobile parts div. of Service Supply Corp. damaged | 100 |
| **Chester, S. C.**—Bldg. occupied by Efird's Dept. store and Baker's clothing store destroyed | 150 |
| **Fond Du Lac, Wis.**—Plant of J. E. Burke Co. destroyed | 225 |
| **Montreal, Canada**—Printing shop, restaurant, tobacco shop and textile storage depot damaged | 80 |
| **Chicago, Ill.**—Garage and twenty-five trucks of the Chicago Sun destroyed | 75 |
| **Chicago, Ill.**—The Hysan Products Co., mfrs. of disinfectant, and the State Ignition Service, damaged | 75 |
| **Scotia, N. Y.**—G. E. Van Vorst & Co. hardware store and the adj. Swires dept. store destroyed | 170 |
| **Jackson, Mich.**—Lancaster Box Co. plant and Michner Plating Co. storage bldg. damaged | 50 |
| **Cowansville, Que.**—Seven store and apt. bldgs., Main Street, destroyed | 425 |
| **Covington, Ky.**—Madison Theatre bldg. destroyed | 125 |
| **Paterson, N. J.**—Three business establishments destroyed | 80 |
| **Fairbanks, Alaska**—Entire village of Tenana destroyed | 50 |
| **San Francisco, Cal.**—Three-story apartment bldg. destroyed | 50 |
| **Syracuse, N. Y.**—Warehouse of Grange League Federation damaged | 60 |
| **Kingston, Nova Scotia**—Warehouse of Bluenose Fruit Co. damaged | 80 |
| **Ilwaco, Wash.**—Ilwaco Bakery, Brumbach Dept. Store destroyed | 50 |
| **Gurdon, Ark.**—Commercial Hotel block, housing post-office, Clark County Bank, Gurdon Beauty Shop, Bur Morris store, Dr. T. B. McClain's office and Commercial Cafe destroyed | 80 |
| **Detroit, Mich.**—Natl. Tent and Awning Co. damaged | 50 |
| **Kinston, Nova Scotia**—Princess Restaurant and adj. stores damaged | 50 |
| **Truro, Nova Scotia**—New Central School auditorium damaged | 50 |
| **Portland, Ore.**—Creston grade school destroyed | 80 |
| **Port Allegany, Pa.**—Pierce Glass Co. plant, destroyed | 50 |
| **Greeneville, Tenn.**—Tobacco warehouse destroyed | 50 |
| **Cooke City, Mont.**—McLaren Gold Mine Co. destroyed | 80 |
| **Higginsville, Mo.**—Lumber yard, also adj. house of Fire Chief Fred Newman, destroyed | 50 |
| **Pharr, Tex.**—Packing plant of Texas Produce Co. destroyed | 125 |
| **Chicago, Ill.**—Craftsman Wood Service Co. destroyed | 50 |
| **Evansville, Ind.**—First Christian Church destroyed | 50 |
| **Oelwein, Ia.**—Bldg. occupied by Wardell Chevrolet Co. and Wardell & Moore Machine Co. destroyed | 225 |
| **Rochester, N. H.**—Apt. bldg. known as Bradford Inn. destroyed | 50 |
| **Lackawanna, N. Y.**—Central Hotel destroyed | 60 |
| **Portsmouth, Ohio**—Coal tipple of Wheeling Steel Co. damaged | 60 |
| **Oshkosh, Wis.**—Sears, Roebuck & Co. destroyed | 80 |



Kidde "local application" system smothers agitator fires in less than twenty seconds.

# KIDDE GETS 'EM YOUNG . . . and treats 'em rough!

KIDDE KILLS TOUGH FIRES

Big blazes begin life as little ones. But they grow fast, and *get tough* when they feed on flammable liquids (Class B fires), or on electrical equipment (Class C). Ordinary water type extinguishers cannot stop these tough fires. But all laboratories *do* approve smothering them under a barrage of carbon dioxide gas.

That's the method used in Kidde built-in systems to choke off tough fires as soon as they start . . . *in less than twenty seconds* . . . directing the carbon dioxide to the flames from specially designed nozzles. When *automatic* systems are used, fires are frequently killed before nearby workers realize a fire has started.

Moreover, Kidde systems leave no after-fire mess to be cleaned up; cannot damage electrical insulation; and do not contaminate mixes or harm materials. For carbon dioxide gas is dry, inert, odorless and non-toxic. Consequently, the Kidde technique is recognized as one of the fastest, cleanest and surest methods of fire extinguishing in use today.

For safety's sake, check the accompanying list of typical industrial fire hazards. If you have one of the tough-fire hazards in your plant, call in a Kidde representative. You'll find him wise in the ways of fire prevention. Drop us a line.

- Process Rooms
- Ovens
- Spreaders
- Motors
- Storage Rooms
- Mixers
- Coaters
- Transformers
- Dip Tanks
- Agitators
- Washing Trays
- Control Panels

★

**Walter Kidde & Company, Inc. • 140 Cedar Street, New York 6, N. Y.**

*We shall appreciate your mentioning* FIRE ENGINEERING *when writing advertisers*

# REACHING FIRE FIRST

*with*

## Randolph "4"

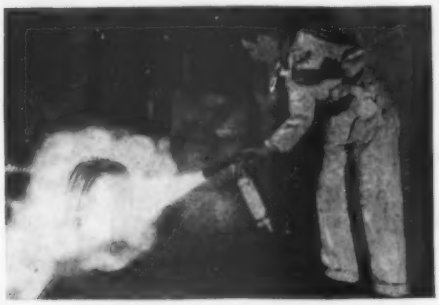
CARBON DIOXIDE
FIRE EXTINGUISHER

Few people think about fighting fire until they actually face the flames.

That's why it's so important that *every* fire extinguisher in buildings, shops and factories operates *easily—quickly—thoroughly!* Randolph "4" speeds and simplifies industrial fire defense. It chokes gasoline, oil, paint, machine, electric fires—instantly. Hits the blaze before the fire can spread!

**Approved by the Underwriters' Laboratories, Inc.**

*Mobilize* against fire with Randolph fast-action carbon dioxide. For complete details and prompt service, call your supply house, or write us—today.



***ONE HAND ACTION!*** Just a thumb-touch discharges carbon dioxide. With no valve or nozzle to adjust—it's PANIC PROOF. A safe gas, it leaves no trace. Will not deteriorate or freeze.

Send for our new, **FREE** booklet "Sharpshooting at Flames." Illustrates fast $CO_2$ fire-fighting.

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# *SPECIAL BINDERS AGAIN AVAILABLE*

Every issue of FIRE ENGINEERING has something you may want for future reference. With one of these standard handy binders, you will have every article at your fingertips and a complete index of everything published during the year. The binder holds 24 issues and two yearly indexes. **Price $2.25**

BOOK DEPT.

**CASE-SHEPPERD-MANN PUBLISHING CORP.**

24 WEST 40th STREET, NEW YORK 18, N. Y.


**Drumright, Okla.** — Tower Theatre destroyed; adj. auto supply store damaged.. 60
**Salem, Ore.** — Capital City Transfer destroyed ..... 60
**Dallas, Tex.**—Friedman Recreation Hall and Schepps Grocery Supply Co. damaged... 50
**Grand Forks, N. D.**—Frederick Hotel and adj. Collins Block occupied by Colborn School Supply Co. and Poppler Piano and Furniture Co., destroyed..... 225
**Denison, Tex.**—J. A. Hadden dept. store damaged ..... 50
**Aberdeen, Wash.**—Corbett apartments destroyed ..... 50
**Walla Walla, Wash.**—Gamble Skogmo Furniture plant destroyed..... 80
**Bourbon, Ind.**—The Elcar Coach Co. plant, a subsidiary of Mid States Trailer Service of Chicago, destroyed..... 60
**Hancock, Mich.** — Elks Lodge Home destroyed ..... 125
**North Branch, Minn.**—Fairway storebuilding housing doctor's office, dentist's office and two Federal agency offices and bldg. of North Branch Review, destroyed..... 80
**Kansas City, Mo.**—Bldg. housing a floor wax mfg. co., and two other big bldgs., downtown warehouse district, destroyed.. 1000
**Columbus, Ohio**—Dwelling of W. E. Blaine destroyed ..... 50
**Halifax, Nova Scotia**—"Governor Cornwallis" of Halifax-Dartmouth ferry fleet destroyed ..... 300
**Ottawa, Ont.**—Campbell drug store and adj. business premises destroyed..... 80
**Columbia, Ky.**—Store block housing drug store, five-and-ten-cent store and beauty shop; also an apartment destroyed..... 50
**New Orleans, La.**—Three apartment houses, housing three small shops including a laundry and barber shop damaged..... 50
**Baltimore, Md.** — Taubman Auto Supply Co.'s store and warehouse destroyed..... 80
**Union City, N. J.** — Plant of American Cabinet Co., mfrs. of "American Shuffleboard" destroyed ..... 50
**Philadelphia, Pa.**—3,200,000 pounds of wool, valued at $1 a pound, and a scouring house of wool processing firm of Hyman Brodsky & Son destroyed..... 3200
**Pittsburgh, Pa.**—Hite's Drug Store damaged ..... 50
**Columbia, S. C.**—Barn, large salvage store just outside city limits, including three warehouses destroyed..... 80
**Spokane, Wash.**—Lomax Grimmer warehouse destroyed ..... 170
**Wheeling, W. Va.**—Caldabaugh Glass & Mirror Co. and Goodrich Rubber Co. destroyed ..... 60
**Walpole, Mass.** — Wellington drug store, ladies' shoppe, two grocery stores and a number of doctors' and dentists' offices damaged ..... 50
**Little Falls, N. Y.**—Mohawk Valley Country Club destroyed..... 80
**Salem, Ore.** — Blue Lake Fruit Canning plant destroyed..... 1275
**Long Beach, Cal.**—United Concrete Pipe Corporation shipbuilding plant damaged.. 80
**Beaumont, Tex.** — Jefferson Packing Co. plant destroyed ..... 80
**Houston, Tex.**—Channel tug boat and docks of American Liberty Pipe Line Co. damaged ..... 200
**Charleston, S. C.**—John J. Furlong & Son printing plant destroyed..... 50
**Presque Isle, Me.**—Express terminal, garage and adj. potato house with 10,000 barrels of spuds destroyed..... 60
**Grenada, Miss.**—Grenada Hotel destroyed.. 50
**Glassboro, N. J.**—Junior Mechanics Bldg., occupied by dress factory, and five stores on the ground floor, destroyed..... 170
**Ashtabula, Ohio**—Swallow restaurant bldg. and four adj. business blocks destroyed... 115
**Bryan, Ohio**—Plant of Bard Mfg. Co. destroyed ..... 215
**Cleveland, Ohio**—Bldg. occupied by Ballard Supply Co. damaged..... 215
**Portsmouth, Va.**—Ship service and recreation bldg. at Norfolk Navy Yard destroyed ..... 170
**Windsor, Ont.**—Building, Pitt Street,..... 60
**Yuma, Ariz.**—Packing shed of Yuma Mesa Fruit Growers Assn. destroyed..... 80
**Plant City, Fla.**—John S. Barnes vegetable packing house destroyed..... 50
**Ottumwa, Ia.** — Tuberculosis Hospital of Sunny Slope Sanitarium destroyed..... 60
**De Witt, Ia.**—Garage of C. H. Anderson, destroyed ..... 50
**Irvington, Va.**—Irvington Fish & Oyster Co.'s plant damaged..... 80
**Perla, Ark.**—Unit No. 1 and Machine Shop of Acme Brick Co., 1½ miles east of Highway 67, destroyed..... 225

EDITOR'S NOTE: *The December fire losses were so heavy that we have been forced to carry a number of listings over to the next issue.*

The Bettman Archive

# INDIAN

## Fire Pumps

## Replaced *Horsepower* with *Manpower!*

INDIAN FIRE PUMPS are the last word in modern fire fighting equipment. A crew equipped with these portable, quick action hand pumps can swarm over a fire and put it out in a jiffy without laying a length of hose. ***Clear*** water does the trick. No chemicals. INDIAN FIRE PUMPS work equally as well on inside as on outside fires. Tests prove it.

D. B. SMITH & CO.
Utica, N. Y.

Ship at once 2 more Indian Fire Pumps. Several weeks ago we purchased 4 Indians and found them very satisfactory.

Yours very truly,
SEELYVILLE FIRE CO.

FOR INSIDE AND OUTSIDE FIRES USE

**INDIAN**

*Clear Water*

**FIRE PUMPS**

**D. B. SMITH & CO.**

406 Main St., UTICA 2, NEW YORK

*PACIFIC COAST BRANCHES:*

Hercules Equipment & Rubber Co., 435 Brannan St., San Francisco, Cal.

THIS ACME MASK IS APPROVED By The U.S. BUREAU OF MINES

Note the Wide, FULL VISION in the above pictured Acme Gas Mask and learn the reason for the popularity of this famous Acme All-Purpose Gas Mask. No other mask provides this Wide Non-Distorted FULL VISION—a definite safety factor to all firemen. The Acme Canister protects against Carbon Monoxide, Acid Gases, Organic Vapors, Toxic Smokes, Fumes, and Smoke Suffocation. Write for literature and prices.

ACME PROTECTION EQUIPMENT COMPANY, INC.
Manufacturers
LIBERTY AVENUE Cable Address ACMEPROCO PITTSBURGH, PA U.S.A.

A BADGE *to be proud of* NOW
*more than ever* BEFORE

Now—because of the Government's prohibition of the use of nickel, brass, copper, nickel plating, and chromium—we are making these badges and insignia in sterling silver, sterling silver gold plated, rolled gold on sterling silver and 14 karat gold.

Today—for just a little more, you get a sterling silver Braxmar Badge—without doubt the best badge you can buy anywhere.

*The blue covered catalog is the latest published but write for our new price list, effective July 29, 1943. Only prices in the catalog on 14 karat gold items are still in effect. A special Fire Dept. circular is now in preparation. Watch for your copy.*

C. G. Braxmar Co., 242 W. 55th St., N. Y.
JOHN O. VEIT, Pres.

BRAXMAR BADGES

Standard for over 60 years

## Correspondence

### Seven Pumpers Used in Relay

*To the Editor:*

Herewith is a picture of a barn fire on a farm that was well out in the rural district of Burlington County (N. J.)

**Seven Pumpers Relayed Water on This Fire**

It occured recently; 14 companies from surrounding districts responded to the alarm for the blaze, which was one and a quarter miles from the nearest stream. The volunteers laid 2½ inch hose that distance, and used 7 pumpers in the relay. By the time this layout was completed little could be saved, however the fire was kept from the residence.

The loss was placed at $60,000. All the barns and silos were well stocked.

Yours truly
JAMES T. ANDERSON
Mt. Holly Fire Dept

### Another Record

*To the Editor of the "Watch Desk":*

After reading the interesting story related to you in the letter from William T. Bedwell, Jr., and published in your column in the November issue, I recalled a similar incident that occurred recently in our department. I don't mean this to be a challenge, but I thought the readers of FIRE ENGINEERING might be interested in reading it, although the circumstances of this story are somewhat different than those in Mr. Bedwell's.

It was late in the afternoon of October 26, 1944 when the alarm was sounded, calling the fire department to a large warehouse located one short block from fire headquarters. The building filled with straw, was on fire and smoke filled the entire area. One of the first firemen to arrive at headquarters was Assistant Chief Craig Shurtleff, who discovered that no driver was available for the pumpers. He drove one of the trucks to the fire and left it, leaving instructions with a foreman and a driver who had arrived at the fire on their way home from work. Shurtleff, seeing that additional aid was needed, ran up the street to the fire house, turned in a second alarm and drove the second pumper to the blaze. By this time all

# RUBBER or CANVAS

# COMBINATION SUIT

## NOW AVAILABLE!

Special combination suit with Bunker Pants is Midwestern's Outfit No. 101. Detachable wool linings. Flexible elastic inner sleeve for wrist. Keeps out water, cold and sparks. Equipped with Midwestern Safety Snap, a new exclusive feature. Can be easily and quickly fastened or unfastened—nothing can catch on it. Will not freeze or jam as easily as old type snap. Midwestern garments are favored by the larger municipal departments throughout the country. Write for literature and prices.

### THE COAT:

- Adjustable collar strap
- Reinforced collar band for lining
- Lining attached with quick snap buttons
- Corduroy lined collars
- Reinforced, double stitched seams
- Vertical seams in sleeve shoulders
- Inside of fabric, heavily napped cloth
- Two outside pockets
- Wool detachable lining
- 6-inch storm flap

### THE PANTS:

- Lining held by snap buttons
- Rubberized fabric belt in lining
- Eight suspender buttons
- Two side and one hip pocket
- Safety snap on belt
- Reinforced adjustable belt
- Special Vanitex fabrics
- Wide protecting flap
- Reinforced by rivets

***Regular Firemen's Boots Now Available!***

**Fireman's boots ¾ length, reinforced instep, felt linings. Do not confuse these boots with reclaimed boots which have been offered firemen for past 2 years. These are regular fireman's boots made of the new synthetic rubber. Write.**

*See your Midwestern Mfg. Co. representative for catalog and prices, or write the factory.*

# Midwestern Mfg. Co.

## Mackinaw, Illinois

*Here's the*

# Quicker, Safer Way to Put Out Fires

The Universal Nozzle provides the *quicker* way to put out fires because the hoseman can change the type of stream in an instant for any sudden change in fire conditions. The Universal Nozzle provides the *safer* way to put out fires because it can put a 130 degree water curtain between the hoseman and the flames . . . also in an instant . . . while retaining a solid stream, if desired. The Universal is the versatile nozzle, proved by seven years of actual use under all conceivable conditions.

Solid Stream • Fog • Water Curtain
or Any Combination
with

*The* UNIVERSAL NOZZLE

Satisfied Users Include

The U. S. Army and Navy at their air stations, the U. S. Coast Guard on its vessels, in addition to industries and municipal fire departments everywhere.

Write for Details

Inquiries about this remarkable nozzle are invited. Dealers, industries, and fire departments will be sent full details without any obligation.

**L. N. CURTIS & SONS**
*Emergency Equipment*
451 Hudson St.
OAKLAND 9, CALIF.

485 Pages
Profusely Illustrated

*Bible of the Fire Service*

THE FIRE CHIEF'S HANDBOOK
By FRED SHEPPERD

Gives a practical, authoritative answer to almost every question that might come up in modern fire fighting practice.

A valuable reference guide for the progressive fire chief, and for the fire fighter studying for promotion.

*Order Your Copy Today. Your money back if not satisfied (within 5 days).*

**$4.00** *per copy postpaid*

Case-Shepperd-Mann Publishing Corp.
24 West 40th St., New York 18, N. Y.

the available firemen, including drivers and Chief G. R. Gehrig, had arrived home from work in time to hear the second alarm. With sufficient help and equipment the blaze was brought under control in a short time. This fire was an example of conditions in a small community served by a volunteer fire department whose membership is small because of the number of its members in the Armed Forces. Those who are still around are working during the day and are not always able to answer an alarm promptly.

J. FREDERICK BEUERLEIN, Pres.
Active Hose Co., Mt. Morris, N.Y.

## Pouring Water into Smoke

*To the Editor:*

Too often water is poured into smoke without due regard as to whether or not the water hits the base of the fire. It is this fire which creates the smoke and until we put the water on this fire we are going to continue to have smoke. So shut down your lines and lets look around.

The house is heavily charged with smoke but we don't see the fire. So we will open up a few windows and let some of the heat and gases out of the interior of the house.

After a few minutes, the smoke thins out a little and we can enter through the front door. We have our service or oxygen masks on and we don't have too much trouble finding our way about through the smoke. Lo and behold, there it is, "the fire," in a clothes closet in the small bedroom off the hall. We send for a booster line and in a couple of minutes the fire is out. Somebody's wardrobe gone up in smoke overcoats included and not much left but a pile of burnt rags and the inside of the closet is pretty near burned out but not much damage outside of the closet other than the door and frame.

Say look at the damage in the living room. Everything wet, pictures knocked off the wall and books and lamps laying on the floor, what a mess. Gosh weren't we a bunch of fools for pouring water into that living room window from that 2½" line.

Use the booster line or 1½" hose for inside work. Don't open up the line until you see the fire and cut down water damage.

JOHN DECKER,
Springfield, N. J., Fire Department

## Juvenile Delinquents

*To the Editor:*

I was quite interested in your round table discussion on juvenile delinquency as it refers to the fire service.

As a result of a ten-year-old boy pulling a false alarm, one of our assistant chiefs was killed. Each one of our assistant chiefs has his own private car and Chief Walter Meyers was home having supper on the night of May 24 when the fire alarm sounded. Chief Meyers responded from his home in his car and was struck by one of our company trucks and was killed. There was no fire, but the results were: one dead, one truck damaged to the extent of $750.00 and the chief's car completely demolished.

GEORGE W. CULP
Driver, Fairmount Fire Company
Norristown, Pa.

# Republic

## DESIGNED AND CONSTRUCTED FOR MUNICIPAL FIRE SERVICE

RECENT engineering has effected a decided improvement in the structure of Republic brand Fire Hose. Heavier and more rugged yarn construction of the closely matched inner jacket improves wear and pressure resistance. The jackets are so designed to complement one another and make a homogeneous structure. The tube of scientifically compounded synthetic rubber is designed for flexibility and maximum life. For municipal service under severe operating conditions, specify Republic brand—the extra-quality, improved Fire Hose.

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DIVISION

LEE RUBBER & TIRE CORPORATION

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REPUBLIC INDUSTRIAL PRODUCTS
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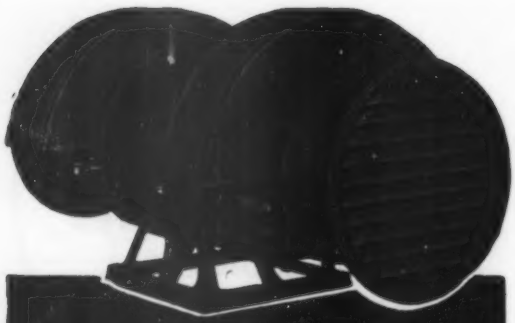
LEE DELUXE TIRES AND TUBES
CONSHOHOCKEN, PA.

WE ARE PARTICIPANTS IN THE OWNERSHIP AND OPERATION OF NATIONAL SYNTHETIC RUBBER CORPORATION

**BETTER THAN BEFORE**



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GENERAL ALARM SIREN
You Can Depend On It ALWAYS

An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to instal and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M".

ALSO
manufacturers of a complete line of apparatus sirens.
Write for literature.

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street Rochester, New York

Where Dependability is Vital
ORDER EASTMAN FITTINGS

Specify Eastman fittings. 120 years of dependable service in carefully manufactured, sturdy fittings that stand up under long and hard usage makes every EASTMAN product a *dependable* leader in the fire fighting field.

A complete line of hydrant gates, siamese, adapters, suction strainers, holders, reducers, running-board flanges, hose caps and connectors.

*When ordering, specify whether pin lugs, long handles or Eastman ear lugs are desired.*

SAMUEL EASTMAN COMPANY, Inc.
CONCORD, N. H.

## Manufacturers' Announcements

### Cardox Announces Changes

Cardox Corporation, Fire Division (H. W. Lange Sales Manager) engineers and manufacturers of low-pressure carbon dioxide extinguishing systems and mobile equipment, announce the following staff changes:

J. W. Krallmann has been appointed District Manager for the territory including Western New York State, Northern New Jersey and all of New England with headquarters in New York City. He was formerly District Manager for the territory including most of Ohio, Indiana and Kentucky, with offices in Cleveland, Ohio.

William C. Powell has been named to succeed Mr. Krallmann in that latter's old territory. Mr. Powell has been District Engineer for Illinois, Northwestern Indiana and Wisconsin area, located in Chicago.

Goodwin N. Roberts will take over the responsibilities of District Engineer of this section in association with J. W. Long, the District Manager.

Arthur W. Espey has joined the Cardox Fire Division organization as District Engineer for the territory embracing Pennsylvania, Delaware, Maryland, West Virginia, Western New York and Southern New Jersey. In this territory he will work with F. C. Rodgers, District Manager. Mr. Espey ("Art" to hosts of friends) is well known in the fire protection field having been associated with it for a number of years through his connection with the Pennsylvania state fire training program. He will make his headquarters in Philadelphia.

### Story of Communications

Link Radio Corporation, 125 West 17th Street, New York, N. Y. has published a brochure entitled *"Tom Tom to Electron"* which traces communications down through the ages—or perhaps it would be better to say "up through the ages,"—because it starts with the dark ages and concludes with the most recent developments in wireless.

Reference is made to the use of radio communications by municipal fire, law enforcement and other agencies, and by various branches of the Armed Forces.

This same company also issues *"The Link Bulletin,"* an eight page house publication, which is filled with informative material on radio communications. The December 16 issue (Vol. 2 No. 44) contains an interesting item on how Link FMTR-W cuts time for the Cambridge Mass. Fire Department's Rescue Squad No. 1.

### New Burn Treatment

The Davis Emergency Equipment Co., Newark, N. Y. has developed a new chemical formula, Hydrosulphosol Ointment, which, it is claimed, is successful in the treatment of burns. The Company states that its Hydrosulphosol Ointment and Hydrosulphosol Solution have been used successfully in hospitals for the past four years "on all types and degrees of burns." The claims for this new sulphydryl solution are: quick relief from pain, infection control, acceleration of healing, non-toxic safety and the stimulation of new tissues or

A.D.T.

*Electric Protection Services*

**FIRE • BURGLARY • INTRUSION • HOLDUP • SABOTAGE**

American District Telegraph Company (A.D.T. System) is the only nation-wide organization specializing in electric protection services. A.D.T. manufactures and installs electrical protection systems to safeguard lives and property against the hazards of fire and unlawful intrusion. Systems also are provided for the supervision of watchmen and guards and of certain industrial processes. The protection equipment within each customer's premises is connected with an A.D.T. Central Station where skilled attendants stand constant vigil and respond to alarms by dispatching armed and bonded private guards, the police, the fire department, or by initiating whatever other action may be required by the nature of the emergency. In localities where Central Station service is not available, the protection system usually may be connected to the local police or fire department.

**FIRE PROTECTION SERVICE**

• ***Sprinkler Supervisory and Waterflow Alarm:*** Automatically detects and reports trouble conditions (whether caused maliciously or otherwise) that might impair the sprinkler's effectiveness. Automatically summons the fire department the instant a sprinkler head opens or in case of a serious leak.

• ***Aero Automatic Fire Alarm:*** (For unsprinklered areas, or in conjunction with sprinklers.) Automatically detects fire when it starts, and automatically summons the fire department.

• ***Manual Fire Alarm:*** Available in various types—for summoning the fire department, for sounding local alarms to warn occupants, or performing both functions.

• ***Automatic Fire Control for Air Duct Systems:*** Provides automatic fire and smoke detecting and reporting devices for air conditioning, ventilating and other air duct systems. Automatically closes dampers, stops fans, etc., and summons the fire department.

**INTRUSION DETECTION SYSTEMS**

• ***Burglar Alarm:*** Protection for doors, windows, skylights, etc., by means of electrified screens, foils and similar devices.

• ***Holdup Alarm:*** Provides means for transmitting a silent signal to summon police in case of holdup or other emergency.

• ***Invisible Ray Alarm (Photoelectric):*** Projects beams of invisible light across indoor or outdoor areas. Interruption of beam by any person or vehicle results in an alarm.

• ***Telapproach:*** Establishes an electronic field and produces alarm upon approach of any person into the electrical field.

• ***Phonetalarm:*** A sound detection system especially adaptable for protection of vaults containing valuables such as specie, securities, confidential plans and documents, narcotics, gauges, tools, etc.

• ***Emergency Police Call:*** Provides means for summoning police direct to premises in case of emergency.

**PATROL SUPERVISION FOR WATCHMEN AND GUARDS**

• ***Central Station Watchman's Reporting Service:*** Provides signaling stations electrically connected to the A.D.T. Central Station to which the watchman reports at prearranged intervals. Failure to signal is immediately investigated.

**OTHER A.D.T. SYSTEMS**

• ***Heating System Supervision:*** Electrically supervises temperature, flame failure, oil supply, vacuum, pressure, humidity, current supply, pilot safety, automatic stoker. For coal, gas or oil fired systems.

• ***Industrial Process Supervision:*** Electrically supervises temperature, humidity, power, water supply, etc., in various industrial processes such as mixing, cooking, drying, cold storage, etc.

The benefits derived from A.D.T. Protection are far-reaching....May we tell you how it can benefit you? Write our Executive Offices, 155 Sixth Avenue, New York, N.Y., for free descriptive booklets.

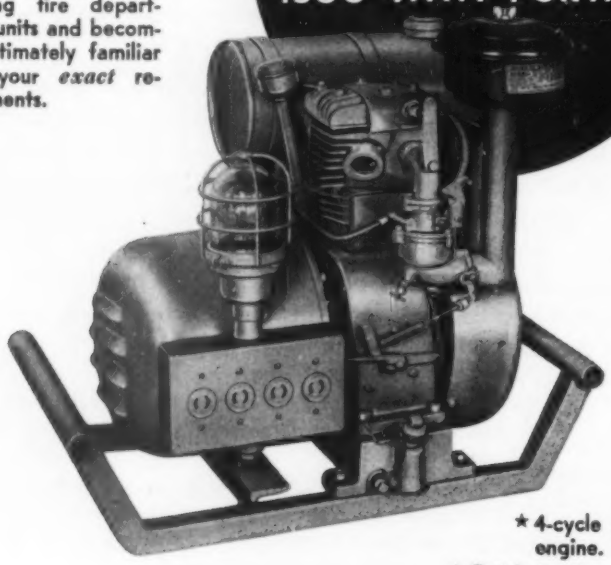
A.D.T.

*Controlled Companies of* **AMERICAN DISTRICT TELEGRAPH CO.** *155 Sixth Avenue, New York, N. Y.*

CENTRAL STATIONS IN ALL PRINCIPAL CITIES OF THE UNITED STATES

This new 1500-watt U. S. Portable meets your own specifications of what a fire department portable should be—because it is the result of our many years of experience building fire department units and becoming intimately familiar with your *exact* requirements.

*New*
**FIRE DEPT.**
**1500 WATT PORTABLE**



★ 4-cycle air-cooled engine. 3.2 H.P.
★ Quick starting.
★ No fussing around mixing oil and gasoline.
★ Positive spash system lubrication.
★ Automatic voltage regulation under all loads. No adjusting necessary.
★ Equipped with carriers for easy portability.
★ Designed for *dependable* operation—a vital requirement for fire department service.
★ Larger and smaller sizes available.

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ARMY (E) NAVY

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Reg. U. S. Pat. Office
**FLEXIBLE STRETCHERS**
No. 101

Every casualty, no matter how slight or how serious, can be made worse by rough, improper handling. Reeves Stretchers can be used in the most inaccessible places.

If your dealer cannot supply you write to:

**A. SMITH & SON, Inc.**
**1237-39 RIDGE AVE.**
**$14.50 PHILADELPHIA, PA.**

repair of burned ones to check the danger of disability. Literature on the subject includes: (1) Bulletin No. 134, a summary of the values of Hydrosulphosol Ointment and (2) A group of medical reports by physicians and scientists on results of laboratory and clinical tests.

### Wooster Brass Catalog

The Wooster Brass Co., Wooster, Ohio, has issued Catalog B covering its full line of couplings, nozzles, play pipes, siamese, gate valves, etc. indexed under ten general headings. The book, which is loose-leaf, contains over 122 pages with copious illustrations, tables and other data, much of it of a general nature and all of which should be useful to chief officers in the fire service.

## Copper Restrictions Eased by W.P.B.

A New Year's present to the fire service was the lifting of restrictions on the use of copper and copper base alloys in fire hose couplings by the War Production Board. The changes in regulations now permit the use of copper and copper alloys in the manufacture of 1½-inch and 2½-inch fire hose couplings. According to Order L-39 relaxing the former restrictions, malleable iron, formerly used in lieu of copper, is in critical supply.

Actual wording of the order, according to the Federal Registrar of December 22, 1944, is as follows: "(vii) Any part of couplings for fire hose, but in no case shall the alloy used for castings contain more than 74 per cent copper and 2 per cent tin."

Other principal changes made in the amended order, which covers fire protectives, signal and alarm equipment are:

Deflectors on sprinkler heads, for which copper castings were formerly required, may now be made of copper sheet.

Alloy containing 2% tin is now permitted in the manufacture of lever arms of automatic sprinkler heads. No tin was formerly specified.

Restrictions on the manufacture of stirrup pumps and incendiary bomb control equipment have been removed from the order. Also removed are the restrictions on the manufacture, sale and delivery of air raid warning devices requiring motors larger than three horsepower, and on the manufacture, purchase, sale and delivery of smoke, fire or infusion detector equipment employing photoelectric principles.

## Fire Protection and A.R.P. Year Book 1944-45

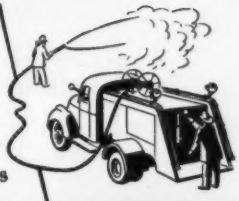
The 1944-45 edition of Fire Protection and A.R.P. Year Book has been published by *Fire Protection*, the official journal of the National Fire Service, Aldwich House, London.

This edition contains over 300 pages of factual information, indexed for ready reference on the National Fire Service, Empire Fire Brigades, Government Departments, Statutory Rules, Water and Fire Prevention Data, First Aid, etc.

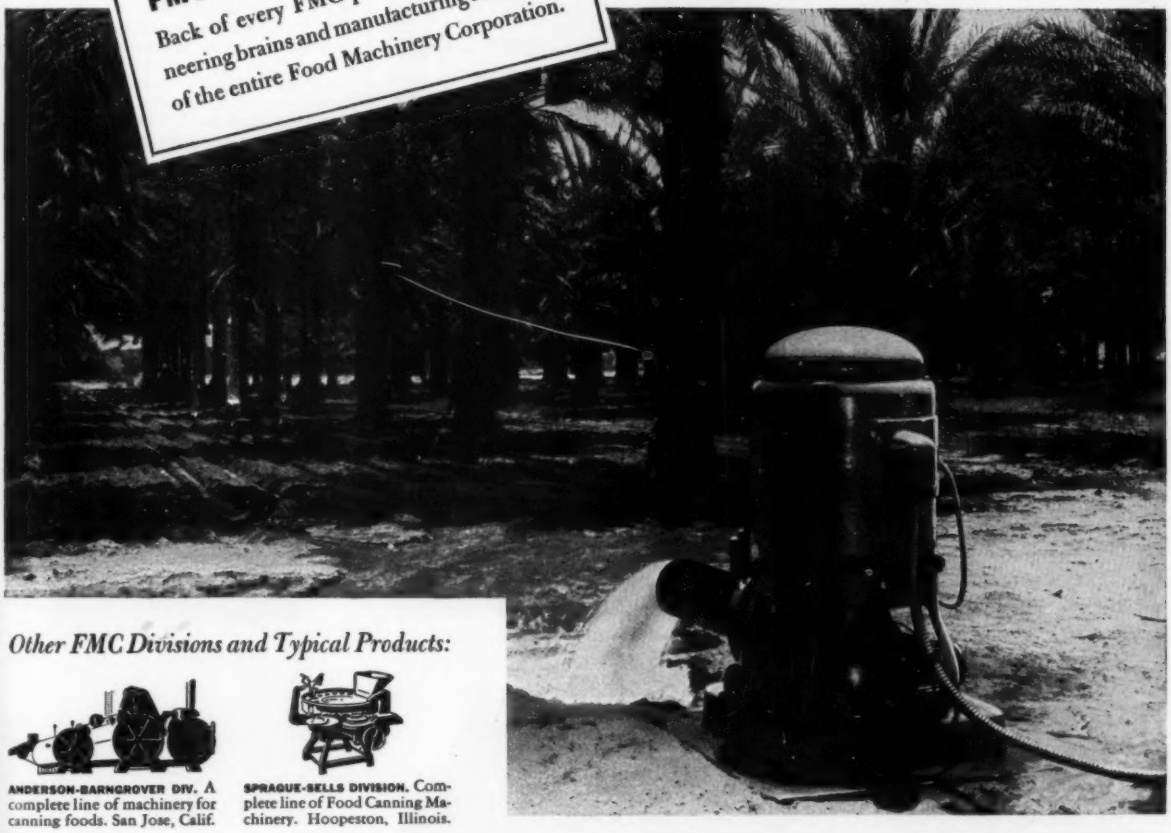
*Another product of the Company that makes*

**FMC Original Fog Fire Fighters**

Back of every FMC product are the engineering brains and manufacturing resources of the entire Food Machinery Corporation.



**FMC's JOHN BEAN MFG. CO. DIVISION** are the manufacturers of Fog Fire Fighters, Automotive Service Station Equipment and Bean Royal Spray Pumps. Lansing, Michigan.



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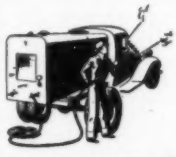
**SPRAGUE-SELLS DIVISION.** Complete line of Food Canning Machinery. Hoopeston, Illinois.

**TEXAS DIVISION**... Food Protective Processes, Fruit & Vegetable Packing Equipment, Canning Machinery. Harlingen, Texas.

**FLORIDA DIVISION**... Citrus and Vegetable Packing Equipment, and Food Protective Processes. Dunedin and Lakeland, Florida.



**BEAN-CUTLER DIVISION**... FMC Fog Fire Fighters, Crop Sprayers and Fruit and Vegetable Packing Equipment. San Jose, Calif.

**"WATER BUFFALO"** amphibious tanks. 7 of Food Machinery Corporation's 14 major factories are making "Water Buffalos" or sub-assemblies.

**NIAGARA SPRAYER & CHEMICAL CO., INC. DIV.** Insecticides to protect crops from insects, diseases. Middleport, N.Y.; Jacksonville, Fla.; Burlington, Ont., Canada.

**RIVERSIDE DIVISION.** Citrus Packing Equipment, Automatic Box Making & Lidding Machinery, Fruit and Vegetable Protective Processes. Riverside, California.

# Peerless Pumps

## ...bring deserts to life...supply water for entire cities

The irrigation pump pours out torrents of cool, clear water from deep underground, and arid wasteland turns green and bears fruit. In great cities and humming factories, batteries of pumps supply hundreds of thousands of gallons of life-giving water every minute. *Wherever water is pumped*—cities, factories, ranches, overseas with our armed forces—Peerless Pumps are known and preferred. Whatever its type—Turbine, Hi-Lift or Hydro-Foil—every Peerless Pump embodies the superb engineering, advanced design and sound construction that is typical of *all* products made by FMC.

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**EXECUTIVE OFFICES: SAN JOSE, CALIFORNIA**

*Peerless Pump factories are located at Los Angeles and Fresno, California; Canton, Ohio*

This emblem, which identifies one of the Nation's most complete lines of department supplies, is known and respected wherever fire fighting equipment is used. It is the mark of thoroughly sound design and extremely high quality.

ELKHART BRASS MANUFACTURING CO. Inc.
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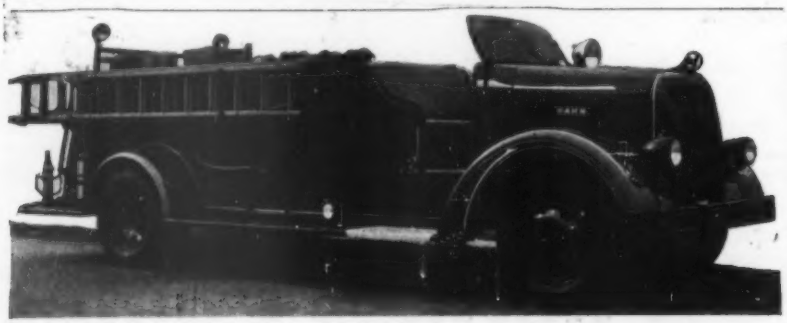


"HAHN" FIRE APPARATUS
SINCE 1907

FINEST IN THE WORLD * STREAMLINED * BALANCED CHASSIS * AMPLY POWERED * VERY EFFICIENT PUMPS WITH PLENTY IN RESERVE

HAHN MOTORS, Inc.
HAMBURG, PA.

## Chief Edward Siller Retires

Fire Chief Edward H. Siller, veteran of thirty-four years service in the Yonkers, New York, Fire Department, retired on January 15, 1945. It is expected he will receive three-quarter pay pension as a result of the serious injuries he received at the fatal Warburton Avenue fire, that city, on January 31, 1943, in which two firemen were killed and six injured. In this fire Chief Siller, who was buried beneath the collapsed first floor of the apartment, climbed up a hose line through flaming wreckage, being seriously burned on the face and hands. In spite of his injuries, which almost proved fatal, Chief Siller directed the work of rescuing his fellow firemen until he collapsed.

Chief Edward H. Siller

Chief Siller, who observed his sixty-second birthday on December 22, 1944, is one of the widely known and popular firemen in New York State and throughout the nation. He was awarded the Department Medal of Honor for his service at the Warburton fire. In 1936, as a captain, he won the First Class Award for a rescue. In 1928 he won the Third Class Award for another rescue and a similar award in 1933 for reviving a woman overcome by gas. He was also the recipient of several Certificates of Good Fire Work from the City of Yonkers.

He was born in New York City; entered the Yonkers Fire Department on October 10, 1910; was promoted to Lieutenant, December 21, 1931; to Captain, December 24, 1923, being assigned to Rescue Co. No. 1 when Chief James J. Mulcahey, now retired, formed it. He was appointed Second Assistant Chief on December 29, 1936; First Assistant in 1939 and made Chief of Department in 1942.

In 1927 he attended the New York City Fire Department School and in 1929, the State's training school at Utica. On his return he was made director of the Westchester County Regional Fire School at Yonkers to which came firemen from all parts of the county. In appreciation of his services as instructor, Chief Siller was honored by many departments, among the gifts presented him being an automobile. He served for some years in the New York State Firemen's Training School and attended

the Edgewood Arsenal defense course. Later he taught wartime fire defense.

"Ed as he is known, was for some years Treasurer of the Fire Chiefs' Emergency Plan of the county, which he helped organize, and of which he is now vice-president. His department was recently awarded the Coast Guard Security Shield for outstanding service.

Chief Siller is a member of the International Association of Fire Chiefs, the Eastern Association of Fire Chiefs, the New York State Association of Fire Chiefs and numerous other fire service organizations.

First Assistant Chief William C. Garvin, who has been Acting Chief in Chief Siller's absence from office due to his injuries, succeeds him as Chief.

## Chief John W. O'Hearn Retires

The official announcement is made of the retirement of Chief John W. O'Hearn, as head of the Watertown, Mass., Fire Department, after forty-nine years and two months service in the Department—and as Chief since 1912.

Chief John W. O'Hearn

Although he was officially retired in October, 1943, he continued to carry on until the present time.

Chief O'Hearn, who was Watertown's first permanent Chief and the first Fire Chief in the State of Massachusetts to be placed under Civil Service by special act, has had an enviable record both in respect of his years of service to the City of Watertown, as head of its fire fighting forces, and in his work in the New England Association of Fire Chiefs and other fire service organizations. He has for twenty-two years officiated as Secretary-Treasurer of the New England Association and has also taken an active part in the affairs of the International Association of Fire Chiefs.

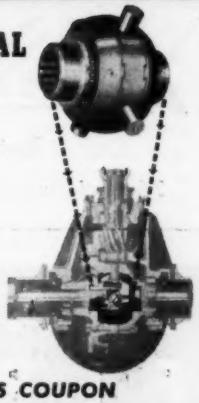
His hosts of friends will be glad to know that Chief O'Hearn will maintain his interest and activities in the fire service. He continues as Secretary-Treasurer of the New England Association, with offices at 22 Mt. Auburn Street, Watertown, Mass.

William C. McElroy has been appointed to succeed Chief O'Hearn as Chief of the Watertown Fire Department.


FIRE WON'T WAIT FOR A STUCK TRUCK

STOP WHEEL SPIN with THORNTON *Automatic-Locking* DIFFERENTIAL

You can get your truck to fires under practically any driving conditions once you equip it with a THORNTON *Automatic-Locking* DIFFERENTIAL. This war proved *locking* differential eliminates stalling due to one wheel spinning—lets you drive down to lake edges, through mud, muck, deep sand or snow—because both wheels *must* rotate when power is applied. Easily installed (2—4 hours). Send for complete free information.



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*Recognized by the Fire Service as Standard*

Questions and Answers for Lieutenant and Captain—$2.50
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24 West 40th Street, New York 18, N. Y.

Barton Front Mounted

AMERICAN-MARSH PUMPS

Barton-American Midship

★

MAY 1945 BRING
EVERY COMMUNITY
A LOWER FIRE LOSS

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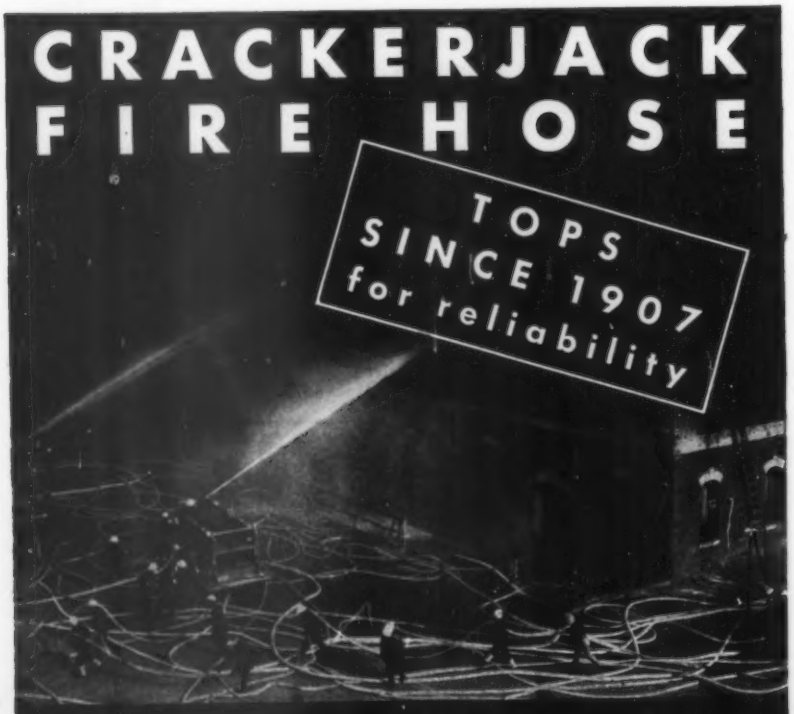
AMERICAN-MARSH PUMPS, INC.
Battle Creek, Michigan, U. S. A.
*The Original Manufacturers of Front Mounted Fire Pumps*

CRACKERJACK
FIRE HOSE

TOPS
SINCE 1907
for reliability



The AMERICAN RUBBER Mfg. Co.
Park Avenue and Watts Street • Oakland, Calif.

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### WANTED

Fire Equipment Supply Companies, to sell Morning Pride Protected Rubber Firecoats, with Wing Sleeves, Chest Protector, Face Protecting Collar, Wool Wristlets, Double Shoulders, No Dirt Pockets. Also Firepants and Mitts. Write Morning Pride Mfg. Co., 1986 Home Ave., Dayton 7, Ohio.

### CHIMNEY POWDER

No need to send men on the roof for chimney fires. Has-Mor Soot Destroyer not only puts the fire out, it continues to work until it cleans the chimney, making it unnecessary to go back to another chimney fire. Put up in handy packages. Agents wanted. Harry S. Morgan, 52 Broad St., Johnson City, N. Y.

### FOR SALE — SIRENS

7—Foster Engineering Company Type 45 Steam Sirens.
19—3 HP, 220 Volt, Sparton Electric Sirens.
8—½ HP, 110 Volt, Sparks-Worthington, Model 100 Electric Sirens.
B. P. Dysart, Purch. Agent, City of Dallas, Tex.

### FOR SALE

Guaranteed 500 pounds working pressure. New hi-pressure booster hose with special expansion ring couplings, guaranteed to stay on. 50 foot lengths only. $45.00 per length. Ideal for all types of fog nozzles, using present pumpers. Doray Fire Equipment Co., 1934 Valley Drive, Syracuse 7, N. Y.

### FOR SALE
### No Priority Required

2 ½ carbon dioxide extinguishers..... $13.95
4 ½ carbon dioxide extinguishers..... 20.16
15 # carbon dioxide extinguishers..... 34.45

All kinds of fire equipment. Write us your requirements. Doray Fire Equipment Co., 1924 Valley Drive, Syracuse, 7, New York.

### FOR SALE
### FIRE DEPARTMENT SUPPLIES

Portable Pumps, Floodlight Generators and systems. Double Jacket Fire Hose, Booster Hose, Coats, Helmets, Masks, Fog Nozzles, Sirens, complete line of Fire Department supplies. Box 30, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

### AGENTS WANTED

To sell high grade line of fire protection equipment and fire department supplies. Good proposition. Write—Schwartz Bros., Inc., 731-733 Filbert St., Philadelphia, 6, Pa.

"Established over 37 years."

### FOR SALE

1—Gamewell Excelsior transmitter mounted in a 50-wheel oak case.
1—Gamewell 50-wheel oak case.
99—Gamewell code wheels for the above equipment. Write for price and pictures.
Edw. J. Hart, Chief, Bureau of Fire, Endicott, N.Y.

### FOR SALE

Large Air Horn and new G. E. Electric Valve. All for $125.00. Horn can be coded. West Ridge Hose Co., 3412 West Ridge Road, Erie, Pa.

## THIS DUGAS *SCREEN*

## SHIELDS FIRE-FIGHTERS

• Dense clouds of fire-killing dry chemical create a real "heat-shielding screen" for the operator whenever a DUGAS Fire Extinguisher, charged with PLUS-FIFTY DUGAS Dry Chemical, is used to beat down a blaze.

All DUGAS Fire Extinguishers —large and small—are designed with fire-fighter protection as well as fire-fighting effectiveness in mind—a big reason why workers who may have to be fire-fighters feel more confident when they see DUGAS equipment close at hand.

*Non-toxic, non-corrosive and non-abrasive. Approved by Underwriters' Laboratories and Factory Mutual Laboratories.*

DUGAS 15-T HAND EXTINGUISHER

DUGAS 150 WHEELED EXTINGUISHER

ANSUL CHEMICAL COMPANY
MARINETTE, WISCONSIN
DUGAS DIVISION


## CLASSIFIED ADVERTISING

### FOR SALE

American-LaFrance Pumper, $500.00. Triple Combination Pumping Engine No. 4956. Complete with suction and booster hose, ladders, etc.

Centerport Fire District
P. O. Box 181
Centerport, New York

## Fire Losses Increase!

Fire losses in the United States in November, 1944, were $33,847,000 according to estimates released by the National Board of Fire Underwriters. This is the highest November loss since 1931, when the total was $33,287,641. The November loss was 7 per cent more than the loss for the same month in 1943 and it was 5 per cent higher than the loss in October, 1943.

For the first eleven months of 1944 the losses are estimated at nearly $43,000,000 more than for the corresponding period a year ago. The Board's estimates are based on incurred losses under fire policies reported by member companies, plus an allowance for unreported losses.

Figures compiled by *Fire Engineering*, based on a daily record of fire reports, show 197 fires occuring during November in the United States and Canada (the above totals do not include Canadian losses) each of which caused damage of $10,000 or more. The aggregate of these was $12,597,125.

## Oppose OCD Equipment as Standard

In its December meeting at Dover Del., the Delaware State Fire Chiefs Association went on record as opposing the use of civilian defense equipment as standard fire apparatus after the close of the war.

Chief Thomas E. Baker of the Robbins Hose Company, Dover Bureau of Fire, which was host to the chiefs from all parts of the state, initiated the action after a paper had been read on the post-war use of OCD equipment.

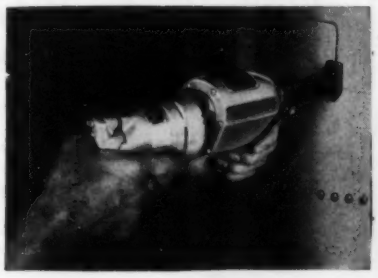
Discussion by the chiefs developed that OCD equipment, provided by the federal government, does not meet standard requirements and has weaknesses conducive to breakdown or serious reduction in effectiveness which, in case of a larger fire, might make it useless and nullify the efforts of firemen.

The equipment, chiefs said, is serving a valuable purpose as auxiliary apparatus during the war emergency, but they frowned officially upon its employment as standard equipment after the war. The chiefs also brought out that a community which has received the emergency equipment might "build a fire company around it" and seek to make itself eligible for admission to the state or a county firemen's association for state or county appropriation. Their attitude was that any company formed in this manner should not be admitted to any firemen's association nor be entitled to the appropriations or other considerations which companies with standard equipment receive.

Chief Baker and other chiefs cited various weaknesses in the equipment and stressed that it should not be recognized as standard apparatus after the war.


## THE NEW *SAW-GUN*

## SHOULD BE STANDARD ON ALL FIRE-FIGHTING EQUIPMENT



## *Here's Why..!*

**The Saw-Gun is a portable power-saw that will quickly cut into all metals, wood and other materials. Quickly attaches to any electric or air drill, and may also be propelled by a flexible shaft. Insert ordinary hack-saw blade for cutting.**

**Firemen equipped with this handy tool can now get at the fire quickly. Can cut openings into obstructions regardless of their material. Cuts rapidly through heavy gauge steel. No need to waste precious time removing steel gratings . . . cut them out of the way with this amazing portable tool. Does away with slow, cumbersome, dangerous gas cutting torches, together with their long lines of hose and heavy tanks.**

**Progressive fire-chiefs who know the importance of getting at a fire *fast*—who want a quicker means of getting to entrapped persons, will add the Saw-Gun as standard equipment.**

ONLY $42.00
QUICK SHIPMENTS ON AA-5 PRIORITY OR HIGHER

*Sold on Money-Back Guarantee*

SEE YOUR JOBBER or WRITE DIRECT

*Mid-States*
EQUIPMENT COMPANY
Saw-Gun Division
2419 S. MICHIGAN AVE., CHICAGO 16, ILL.

# TEAMWORK . . .

Every firefighter knows the value of *teamwork* between volume and pressure in overcoming a stubborn fire.

Working together in right proportion, they result in a high standard of performance.

Hale Fire Pumps are notable for high standards of performance — because of high efficiency, well-balanced design and inherent dependability.

***Write now for up-to-date information on Hale Fire pumps . . . built in all standard capacities.***

**HALE**
**FIRE PUMP COMPANY**
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THE *New* WHEAT
*Rechargeable Spotlight*

MODEL 138

2500 FOOT BEAM
25000 CANDLE POWER
1000 HOURS OPERATION

Critical Materials Reduced to a Minimum to Insure Availability

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## War Fare

By Roi B. Woolley

**Decibels for Sale!**

Did ya ever hear a wild decibel calling to her young? Here's your chance. We learn that city purchasing agent H. F. Wagner of Cincinnati (O) will take your bid for a nice Victory Air Raid siren, complete with 140 h. p. engine, modulator, turn-table, blower and other components.

As a sound generating unit, the siren —a cute little thing of only 5,000 pounds averdupois—operates with great intensity. In fact, it is capable of producing 170 decibels at the throat of the horn or 135 decibels at 125 feet—which is a lot of decibels or almost as loud as Schickelgruber at his noisiest.

The original cost was $3,760.00—in case you wanna bid, but between us, mebbe, you can get it "hulsale!"

* * *

**Back to the Farm!**

A recommendation that the Office of Civilian Defense turn over its war emergency fire fighting equipment to farming and rural areas, when the war emergency need for it has passed, was made at the Chicago meeting of the National Fire Protection's Agriculture Committee, and the National Fire Waste Council, in December. According to reports, the OCD has said it may junk this equipment after the war emergency so as not to create an adverse market for new standard fire equipment, or it may ship the material to European liberated countries. The meeting, said the press, asked that neither of those steps be followed.

* * *

**Denies Chewing Gum Blast!**

In another issue we recounted a "juicy" bit about Glen Gloyd of Philadelphia, Pa., whose chewing gum "exploded." Now we have a clipping from a Quaker City "cutterouter" which says that it was not chewing gum that exploded in his mouth; it was an unidentified object or a wad of chemically treated paper.

Police, which had quoted Glen as saying a stick of gum had blasted the roof of his mouth causing contusions and loosening of a bicuspid or two, sent the remainder of his gum to the FBI for analysis, together with a portion of the paper which he expectorated when the blast let go.

Is this a fit subject for the FBI?

* * *

**Nazis Report "Atomic Bomb"**

German radio stations tried to terrorize the Belgians during their offensive, claiming that Field Marshal Karl von Rundstedt's forces were using an "atomic bomb" in the new attack.

"This is the type of bomb on which the Allies had claimed to have a monopoly," said the announcer. "The Germans used it at St. Vith. Wherever such a missel is dropped, all animals and plants cease to exist. Huge areas of land are scorched, woods are consumed and any human being caught in the hurricane is shattered to pieces."

Boy—page Superman!

P. S. About this time, also, the imaginative Nazis broadcasters were reporting that New York City had been bombed with V2's!

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**Will They Ever Learn?**

According to Col. Joe W. Leedom, senior field protection officer of OCD, San Francisco, a Stevedore in that city was arrigned in Municipal Court for smoking in the hold of a ship while loading ammunition. He must pay a fine of $500 or serve six-months prison sentence.

All this, with the tragic lesson of Port Chicago still in front of dock hands! One is constrained to ask, where is the next tragedy going to occur?—no need to ask when—it's bound to happen with such carelessness!

* * *

**Tempest at Tolar (N. M.)**

Fifteen freight cars of a west bound Santa Fe train caught fire when they left the tracks near Tolar, N. M., in November, causing an explosion of a carload of bombs which seriously injured one person and damaged several homes. The blast was heard a distance of over 40 miles.

The injured man, Jesse Brown, was standing in front of his home some distance away when the wreck occured.

* * *

## OVERSEAS NEWS

**48-24 to Go**

Acting on behalf of the rank and file (NFS) the British Fire Brigades Union has secured the abolition of the 48-24 hours' duty system. As soon as possible it is being replaced by the 24-24. Meantime, it is reported that the four days' leave in every six weeks is restored.

Under the 24-24 there will be extra leave; 12 hours' every third week, and 24 every 21st week. The latter will mean 72 hours' off duty. Acceptance by the NFS of the 24-24 is said to be for the present only. Immediately the service resumes on a peace-footing it will seek a five day week of 40 hours.

* * *

**Jet Propelled Fire Barge**

British fire service publications and the British Information Service feature the story of how jet-propulsion now drives the fire-barge "Good Hope," an adapted lifeboat, on the Devonshire River Torridge. It seems the NFS were called in to help solve the task of propelling this craft, when shipbuilders, which turned over the refitted lifeboat to the fire service could not find the answer. Say the accounts: "Lines of hose were fitted to the pumps (which had been installed without motive mechanism) and four jets brought to bear from the stern just below the waterline. The pumps were started and, driven by the jets, the "Good Hope" moved upstream under her own power at about 5 knots. Subsequently the barge was fitted with permanent driving jets, giving a speed of some six knots."

We respectfully refer the NFS, and their very excellent fire publications to the United States Coast Guard which has been using "jet-propelled" boats and barges for lo these many months!

* * *

**Canadian Fire Fighters Overseas**

There were 400 Canadian fire-fighters who volunteered to go overseas to help British fire forces. The majority of these men were married, we are told, but we also know that at least 15 were not—but are now, having wed English-women.

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# The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

## POST-WAR VALUE OF MILITARY FIRE TRAINING

THE discussion in this round table is a continuation of that which appeared in the December Issue of FIRE ENGINEERING on the post-war value of military fire training.

As an additional feature, however, we have included a number of letters from men in the Services who are engaged in fire protection work, giving their ideas on how this training will be helpful to them.

Readers are invited to send in their comments on this subject or on next month's subject which appears in the box on the following page. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

### Discussion of the Topic

**G. E. Hare, Chief, Jacksonville, Fla.:** There is no doubt that the training that our young men are receiving in the armed services today in fire fighting along the lines of chemical warfare and fire control is good, if the young men will take the training and apply it to civilian life. On the other hand, I hope that they will realize that conditions in civil life are different from those in the armed forces. They will have to adjust themselves to their immediate surrounding, profiting however by their experience and training. One of our most serious problems will be to utilize their knowledge and training in civil life.

**C. J. Eisenbacher, Chief, Tacoma, Wash.:** The fire fighting training that I have had the opportunity to watch was the Navy Fire Fighting School at Manchester, Washington, which deals with ship fire fighting. The knowledge that these men have gained in the use of foam and spray nozzles will be an advantage to the cities along the coast that have fire boats and docks loaded with fuel oil and gasoline tanks. The discipline that these men receive will also be of great advantage to the various fire departments. All in all, I believe the entire training will be a great help to all fire departments.

**J. F. Finnegan, Chief, Richmond, Va.:** The men in the armed forces are given instruction in many new methods of fire fighting and with new apparatus and appliances that are unfamiliar at the present time to our personnel.

These men with fire fighting experience in the armed forces will be valuable to the various fire departments because they will be familiar with many new methods which will ultimately find their way into fire departments after the war.

**C. C. Jennings, Chief, Tulsa, Okla.:** Being "fire conscious" those citizens who have had fire training in the armed forces, will recognize needs of the fire service more than others, and in time of emergency will be of real value to the community.

**William F. Cowden, Chief, Philadelphia, Pa.:** When a serviceman makes application for a position in the Philadelphia Fire Department, he must take a civil service examination. He is allowed ten points on his examination for service. If he gives a full account of his service training, no doubt it will help him on his examination as it will show that he has had some training in the fire service. For a position in some private fire unit in a factory, if he fully states his training, it no doubt will help him to get the position.

**A. J. Mullaney, Chief Fire Marshal, Chicago, Ill.:** The fire fighting training and experience made available to the armed forces by the induction of fire department personnel has been a direct and important contribution to the success of the war effort.

The additional training given to these former fire fighters and to many other young men while in the armed services, plus the actual experiences gained in fighting fires under combat conditions will be an important contribution to many fire departments when the war is over and these men return to their peacetime activities.

Any fire department which is not alive to its current responsibilities can expect to feel the impact of future public opinion which will be greatly influenced by the reactions of returned servicemen.

The present servicemen who have had no previous fire department contacts may be in future positions to have

### HERE IS THE QUESTION

**Today tens of thousands of young men in the armed services are being given instruction in fire fighting.**

**When the war is over and these men return to civil life, in what way, in your opinion, will their training be helpful to the fire service?**

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considerable favorable influence in local fire department management. This will be the result of re-awakened civic interest or by holding positions of governmental authority.

**Terence Mulligan, Chief, Sacramento, Cal.:** In civil life the training that men in the armed services are receiving will be helpful in fire protection and fire prevention. If they follow fire work, they will be given ten points in competitive examinations, and this training would help them in the examination.

**W. P. Payne, Chief, Spokane, Wash.:** Without a doubt the training and discipline men in the fighting branch of the armed services are receiving will be a great help to the fire departments of the various cities where they live. We know that they have not lost any experience but have gained knowledge that we could never have imparted to them. They will be in a position to give us the benefit of their knowledge and experience gained elsewhere.

I believe that we should hold ourselves in a position to be educated by them in any of the methods which are an improvement over our present system. The departments and apparatus, in my opinion, will all be modernized as fast as possible when the war is over, and we'll have to study new equipment and new ways to meet the new conditions.

When they return to civil life, they will be a great help to their respective communities and to the generation that will follow them. All of them will be much better equipped to help this great nation out of their difficulties when future problems face the country.

**J. McKinnon, Chief, Calgary, Atla.:** Men who have had fire training in the armed services could act as fire prevention officers in whatever line of work they follow and therefore eliminate some of the fire hazards that creep in from time to time.

By their experience they can be a great help in confining a fire, should one occur, to a section of a building until the fire department arrives.

**Martin J. Hayden, Chief Engineer, Bridgeport, Conn.:** I feel that the new ideas presented by the needs of the Army and Navy fire fighting units and the experience of seeing new equipment used under different conditions will be of great help to our departments when the men in the armed forces come home. There are several men in the fire fighting units of the armed services from our department and they write and tell us how different the fire fighting methods are from those used at home. All corporations encourage new ideas and I believe that all fire departments should do so also.

The development of new apparatus and equipment through war needs will be a great help to all fire departments

**Charles A. Cunningham, Chief, St. John, N. B.:** The returned serviceman who has had fire training will realize the value of fire prevention. He will know what to do if a fire occurs, which should help to prevent panic in crowded buildings in the event of fire. He will show interest in the fire department and will greatly aid the small town as a volunteer fireman. His training will be a benefit to the large department if he joins it.

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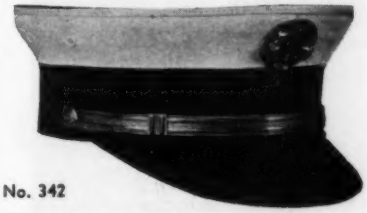

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**H. G. Horton, Jr., Aviation Chief Machinist's Mate, Fire Chief, Saufley Field, Pensacola, Fla.:** The men assigned to the fire department here have shown a greater interest in their jobs since your magazine has been made available to them. It is indeed gratifying to be able to profit by the professional experience of the men who take part in the fires which, to us, were not so long ago merely news items. We are made to feel a closer kinship with the "Brothers," now that our problems, duties and responsibilities are printed, advertised, cussed and discussed in the smoke-eaters "Journal."

Because of this, and because you asked for it, here are a few thoughts on post-war fire protection, and how service-trained personnel can and will be of aid to full-time fire departments.

Men in Service have, for the most part, been trained on standard equipment kept in excellent condition. We are as familiar with the makers of standard fire apparatus as any other firefighter. We use the normal drills and are taught the usual practices of recognized agencies, namely, the Bureau of Mines, various state fire fighting manuals and the instructions and procedures of manufacturers of fire extinguishing equipment, in our daily routines.

Servicemen will fill the needs for both regular and volunter organizations. Some of us are assigned for relatively short times, while others become true professionals, attending exhaustive courses covering all phases of this work. In our small department we have two or three fully trained men, a rough dozen short-course airplane crash school graduates, and ex-members of volunteer forces whose civilian jobs run the scale from railroad firemen and auto mechanics through bus drivers and butchers to airplane mechanics and bartenders.

The prospective leap in the need of men familiar with airplane crashes and attendant rescue procedure will be met with men and information gathered from wartime experience. This is an ever-increasing problem, and one which should be studied and prepared for *now!*

Last of all, there will be many departments which will have to replace men lost to the "Big Fight"; there will be numbers of new forces organized; there will be a great many communities which will feel the need for enlarging their present facilities; what better source of manpower than the ex-G. I., who still feels the yen to bang a bell, tramp on a siren or ride a little red wagon?

Well, that is the way we see it. Don't get the idea that all of us are going to be available, because a few of us are going to stay in the Services, but as long as fires keep flaring up, rest assured that a big part of the crowd will consist of one-time firemen who will have more than an idle curiosity about progress being made. Will we help raise a ladder, carry tarpaulins, hold a nozzle, give a hand on a net, man a shovel? You bet! and do a good job of it, too.

**A. J. McGuirt, Fire Chief, Camp Hood, Texas:** The many thousands of military personnel who have undergone fire training in the camps and air bases throughout the states are definitely fire conscious. They are on the alert, to eliminate any possible fire hazards. They consequently are going to be very valuable to any part of the country in which they reside because of their training.

Feel assured that the fire loss will show a drop throughout the United States after the war is over and the men return to their respective communities.

Many of these young men will go into the fire service in their respective cities and will be of great value to any department. There are many thousands of men well trained; they know the job and, especially those of the crash crews, know no fear.

**Jacob Goldberg, Sgt., Section "C", Army Air Base Branch, Eagle Pass, Tex.:** I was waiting for the next examination to be held by the St. Louis Fire Department, when I enlisted in the Army in October of 1942. Upon coming into the service I had the good fortune of being assigned the duties as fire inspector of this field. I have now been associated with the fire department here for the past twenty-five months.

Here in the service we work as a team; we function as an organization, which is an essential part of any fire department. We have the opportunity to handle men, thus developing lead-

## HERE IS THE QUESTION FOR THE NEXT ISSUE

**The significance of the trumpet and axe on rank insignia in the uniformed force of fire departments is not understood by the general public. In some departments a fire officer wears a badge bearing the title of his rank, but this practice is not universal. In doubt of a fire officer's rank, John Q. Public takes no chance and frequently addresses every fireman and officer as "Chief."**

**The war has made the public conscious of distinctions in the gradations of military rank. The average citizen now quickly recognizes the comparative authority of those wearing the gold bar, the silver bar, double silver bars, the gold and silver leaves, the eagle and the stars. These insigne, while original with the Army and the Marine Corps, are also used on occasion by Naval Officers when in fatigue or summer dress.**

**To make ranks in the fire service more easily identified, do you believe it advisable to add to the shoulders of fire officers' dress uniforms military insignia similar to the various ranks in the armed forces?**

**What advantages or disadvantages do you believe such a plan would entail?**

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ership, which tends to make better future fire officers. And besides, we are getting the actual fire fighting experience, which is the most important of all.

I have learned a great deal about fire fighting, especially fire prevention, and I know this knowledge is going to make me a better fireman, and this, indirectly, I believe will be helpful to the fire service.

**Donald Roberts, Sp. (F) 3/c, Fire Fighting Training Unit, U. S. Naval Training Center, Bainbridge, Md.:** I am one of the youngest fire fighters in the naval fire fighting program. I am nineteen years old, and because of my experience at a naval air station and in a volunteer department, I was chosen to be an instructor. When the war is over thousands like me who are young will want to get in some type of fire department. In the services, in these various fire fighting programs, you really learn how to fight fires through actual experience. We get experience in all types of fires mostly oil and gasoline fires. After the war there will be a great demand for firemen and many fellows like me will be looking for a job. The boys in the services will be able to take almost any type of fire fighting assignment. The experience we get will be helpful in fighting aviation fires. The reason I mention aviation is that aviation looks like the up and coming thing and many men will be needed to man the crash trucks. Many city departments are undermanned at the present time and will need a lot of young fellows after the war. In my opinion, some of the fellows in the service will be able to tell some of the old timers a thing about oil fires.

In this naval program we are subject to ship fires at sea. The Navy makes sure you really know your business before you get a chance to fight an actual fire. In our fire fighting schools there are fellows from almost every department in the United States.

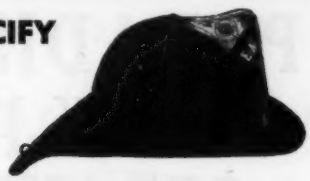
Once a fellow gets the smell of smoke in his blood, you can't hold him down. I know the servicemen will make the best firemen because they are more likely to overcome that "feeling inside." A serviceman will be able to control himself in good fashion. In addition, he has learned to use a number of new fire appliances that as yet are unknown in civilian departments.

**V. Paul Leddy, Corporal, Battery B, 187th C. A. Battalion, East Point, Nahant, Mass.:** While I am not actually assigned to a fire fighting crew in my branch of the Army, I am concerned with fire protection and fire prevention in my particular battery.

I am charged with the duty of servicing and checking approximately seventy-five fire extinguishers of all types, maintenance of fire hydrants, conducting weekly fire drills and in general checking constantly for fires and fire hazards.

In civilian life, I was a fireman at the Hamden, Conn., Fire Department. It is only natural, therefore, that I am interested in the fire fighting profession. I expect, of course, to return to my old job. In my opinion, this training I am getting now is particularly helpful because it keeps me in contact with something I'm interested in and something I'll use in the future.


SPECIFY



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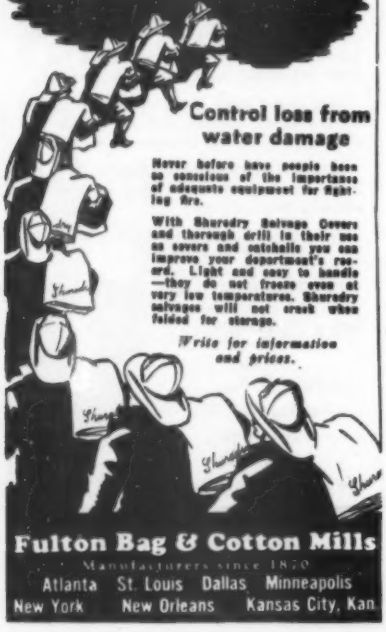
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**Write Your Own Caption!**

Here's one sent in without name or comment. It is headed "False Alarm Box Just Isn't Real" and we print it just as we received it.

KALAMAZOO, Mich. Oct. 19.—*Fire* fans can turn in all the false alarms they like in Kalamazoo and Fire Chief Frank Van Atta won't mind —as long as they use his special alarm box. Chief Van Atta installed the special box today and invited everybody in town to have a try at it—"all day long, if you want to," he said.

The special box sounds a gong and does everything but call out apparatus. The chief said he hoped it would satisfy the urge of pranksters and educate the public in the operation of alarm boxes as well."

* * *

**Watchman Rings Twice**

To get medical aid for a dislocated shoulder Sidney Hess, 52, night watchman at City College, New York City, sounded a fire alarm at 4:15 A.M. He waited patiently. Five fire companies responded, found no blaze at the building at 139th Street and Convent Avenue and departed.

Thirty minutes later Hess again painfully dragged himself to the fire signal and this time the same firemen found him on a bench in the chemical building. Ambulance took him to Knickerbocker Hospital. Hess said he had sat on a bench and when he tried to get up his legs buckled under him and he fell to the floor injuring his arm.

* * *

**Commendations**

Two fires within two days in New York City brought commendations to one division of the N.Y.F.D. and, in particular, to Deputy Chief William Taubert, division head who had both blazes. Battalion Chief Thomas O'Brien of the 5th Battalion came in for posies at one of them.

Fire on November 9th in the basement of Sheridan Square Theatre has already been mentioned. What brought forth praise for the men of the division at this scene was the fact that St. Vincent's Hospital with its hundreds of sick and injured is directly across the street from the theatre. The fire, which threatened to drive the firemen to the outside of the theatre, was fought with the minimum of excitement and noise, and no alarm to patients or hospital staff. Sister Loretto Bernard, Administrator of the Hospital, has officially commended Chief Taubert and his men.

The other situation was a series of small fires in the Sixth Avenue subway on November 8th where ties were burning. The fires in themselves were inconsequential, but could have resulted in great delay to subway traffic and possible injury to firemen had they not been extinguished with skill and caution.

The forces under Chiefs O'Brien and Taubert used water sparingly; set yellow caution lights at appropriate locations and directed operations so that during the half hour of actual fire fighting there were but few minutes' train delay, and neither firemen nor passengers were endangered. Result is, New York's Board of Transportation highly commended both officers and their men in a formal letter to the New York Fire Department, John J. McCarthy, No. 2, Asst. Chief in Command.

* * *

**He "Barely Made It"**

This is a short tale about shorts, to wit: fire house "nighties." It comes to us from a Keystone state contrib' who prefers to remain anonymous. He writes:

*Just a little "tale" for the "Watch Desk": The other nite about* 11 *P.M. we received an alarm, the driver being in bed. All the men out of the office. Down the pole came the driver, in bare legs, nice red, green and white shorts. But—he'd forgotten his boots and night hitch.*

*For a moment we forgot the fire, engrossed in the sprint of the chagrined "fashion plate" across the apparatus floor to the stairs, and up them in nothing flat!*

*It wasn't a "go" for Truck "Z" as it was in "Y's" district. Five minutes later we got another box, but this time the driver was ready!*

*P.S. I like your magazine very much and receive a great deal of helpful information from it."*

* * *

**Department of Red Faces!**

If No. 5 fire station, Council Bluffs (Ia.) had received a fire alarm during a certain night, the only way the crew could have gotten its truck to the scene would have been to either carry, push or pull it, because some miscreant swiped the ignition key.

Fire Chief Waldo Merrill, notified that the key was missing after a routine check had discovered its loss, instructed No. 1 station to respond if anything hit in. Next day the ignition problem was solved by installing a keyless switch on the truck.

Meantime, all hands are searching for the missing key — and the means by which it went A.W.O.L.

* * *

**The Rights (and Lefts) of Firemen's Wives**

This isn't a "gag" but it's about a "gag rule," so-called.

Seems that an organization called the "Firemen's Wives Association of Greater New York" is conducting an all-out

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campaign against Section 248 of the New York City Fire Department Rules and Regulations more aptly known, as the story goes, as the "Gag Rule." The group has printed, had signed and sent to Mayor Fiorella LaGuardia thousands of postcards reading.

Dear Mr. Mayor:

As a citizen of the United States and a resident of New York I protest Section 248 of the New York Fire Department Rules and Regulations as "GAG RULE" and incompatible with our American way of life.

Signed————————

The rule in question is called the suppression of free speech and is said to have been inaugurated to prevent indiscriminate sounding off about the fire department.

* * *

**Mystery of the Plugged Nozzle—Or Was It Sabotage!**

There was considerable dither among the Brothers of Relief Hose Company of Haverstraw, N. Y., when they went to assist in fighting a fire in the home of Fred Quelch, in Stony Point, N. Y., recently.

Seems that the company made a swell stretch, hooked on the nozzle, called for water, and got it—as far as the pipe. But not a trickle dribbled from the tip. Investigation disclosed the fact that the nozzle was effectively "plugged" with a wooden plug. Once this was removed, with the aid of a pikehead axe, and the nozzle replaced, the desired stream was forthcoming.

It looked like sabotage and for a time had the wiseacres aching. But the solution, once found, was simple.

What happened was this (in case you haven't guessed it): The nozzle in question is carried on the running board of the truck, mounted on the conventional wooden plug, or holder, about eight inches long. Through this there is a rod running to the top of the stem and on top of the rod there is a cap in the shape of a knob to hold the rod to the running board.

When the truck responded it was evident that the vibration loosened the metal knob and, when the nozzle was removed, the plug stuck inside. The Brothers were working in the dark and did not notice the knob come off the rod. Naturally, when the water was turned on, the plug became firmly wedged in the pipe, and that was that!

A delegation of the Relief company, headed by Chief Joseph Anges is said to have calmed the Haverstraw Board of Trustees who had fears of a saboteur in their midst.

(Thanks, "Babby" Babcock)

* * *

**Smokes Go Up in Smoke**

Contributing to the weeping, wailing and gnashing of teeth over the lack of cigarettes is the bad news from Portland, Ore., and Columbus, Ohio. In the former city a total of 168,204,000 smokes, or it is said, enough to reach from New York to Los Angeles and back, were burned to ashes at Goldcreek, Mont., December 19, when a carload of the precious fags burned in a fire which followed the train wreck.

From Columbus we received a report that 2,000,000 more will never be smoked by humans because they were lost in a fire that was fought by 11 fire companies.

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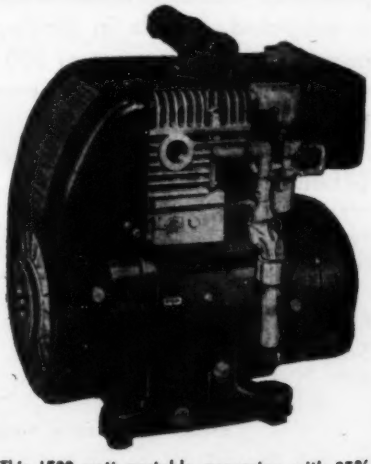

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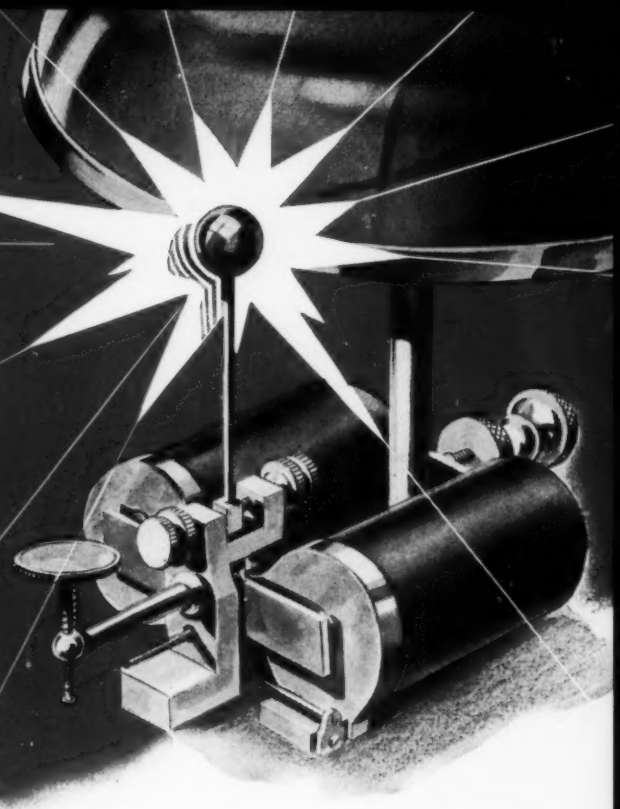

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REFERENCE: Saturday Evening Post, October, 1943 — "Firemen of the High Seas."
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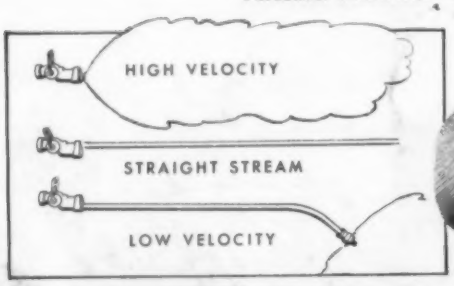


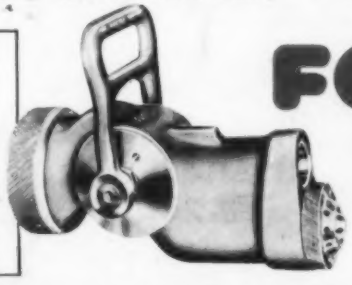

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